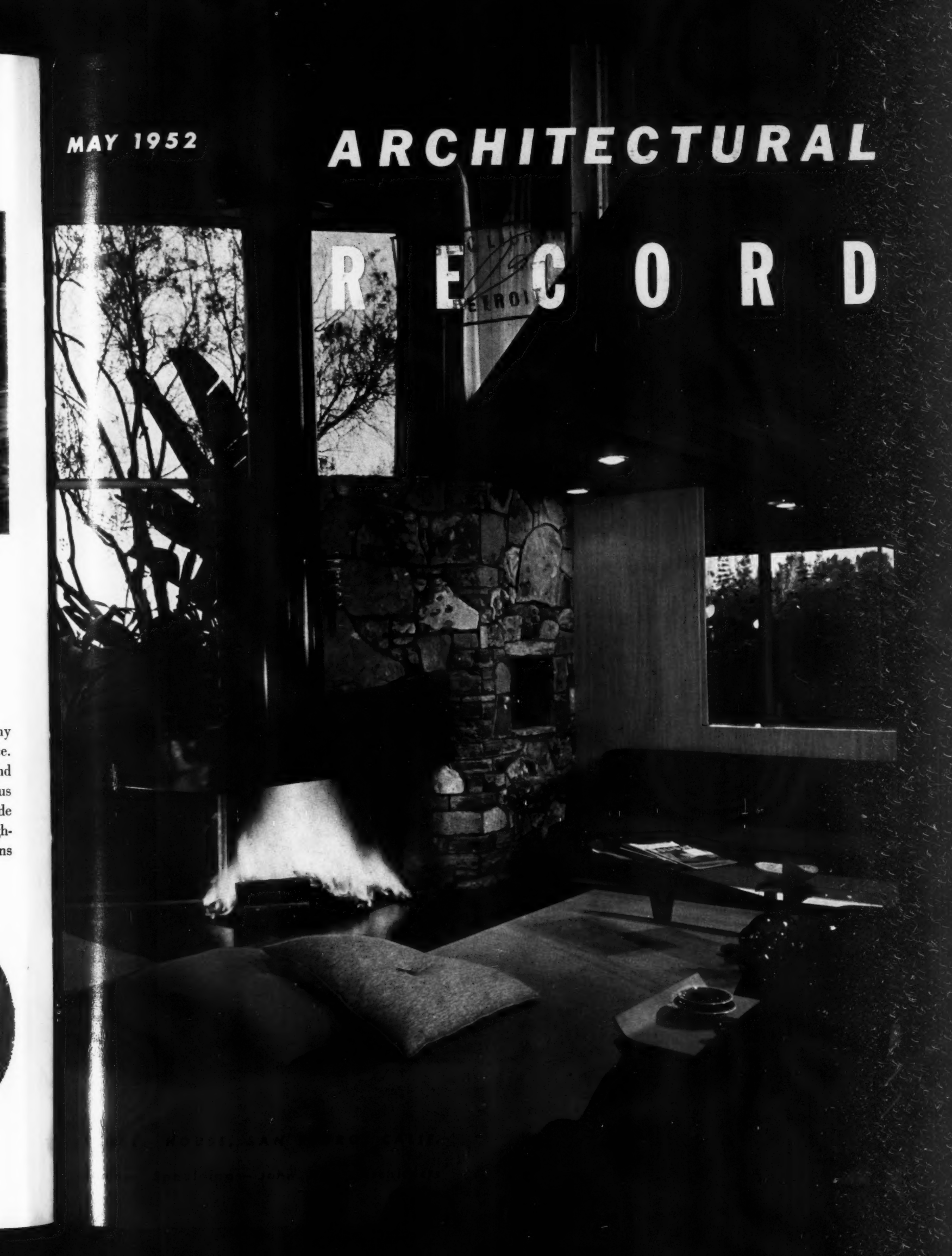


MAY 1952

# ARCHITECTURAL

# RECORD

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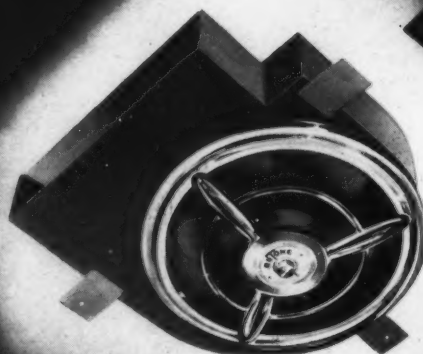
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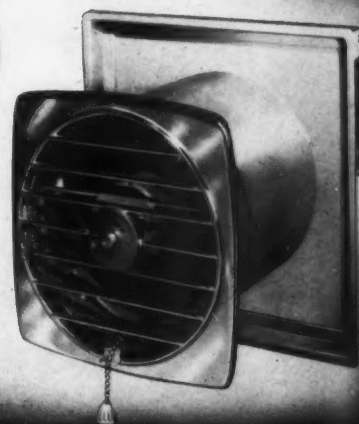
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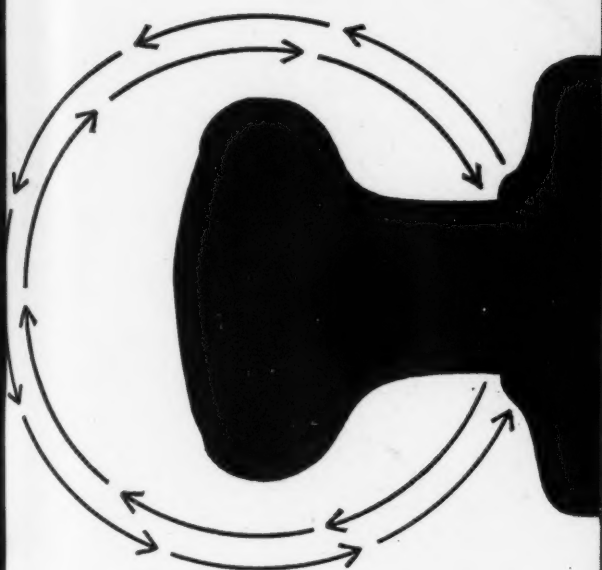
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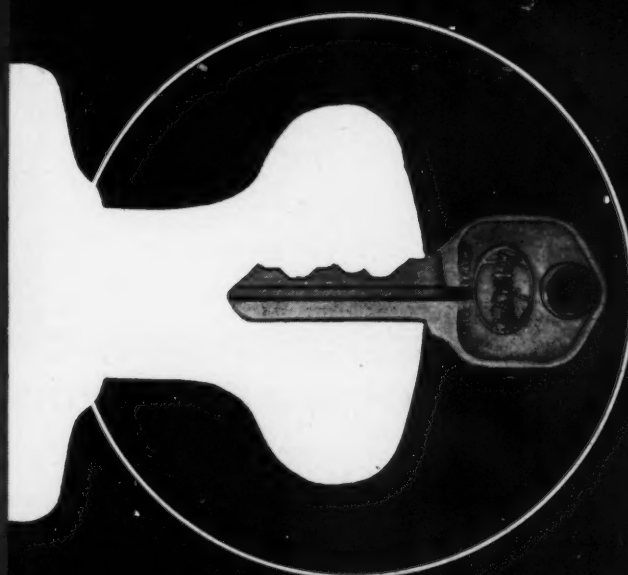
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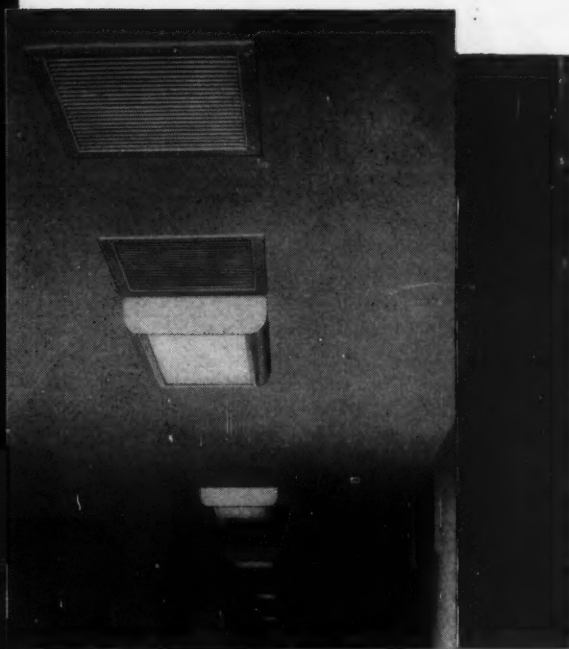
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Cover: Residence of Mr. and Mrs. Arch Ekdale, San Pedro, Calif. Photo by Julius Shulman

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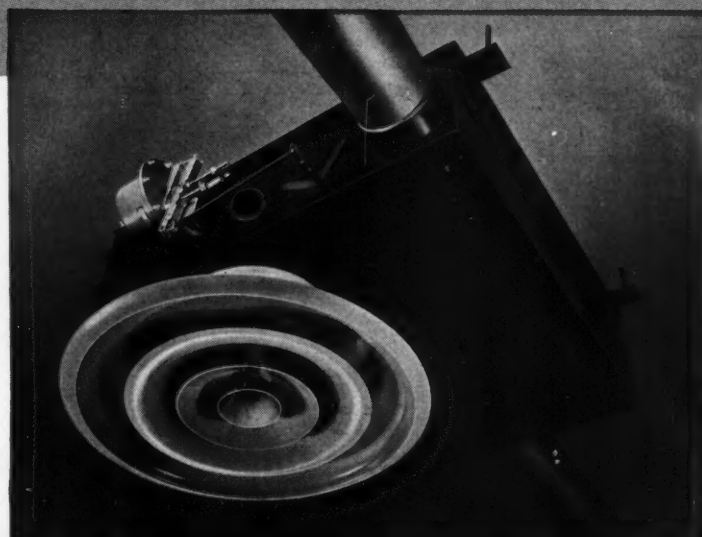
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show reinforced concrete saves 6.76%  
... cuts steel requirements 50%**

In planning this 616-unit public housing project, the Buffalo, N. Y., Municipal Housing Authority ran exhaustive cost studies to determine which type of building frame would be less expensive—reinforced concrete or structural steel. Costs for the project had to be estimated closely, before appropriations could be made.

Engineers of the Housing Authority prepared a complete floor and column design for one building—for both structural steel and reinforced concrete. In addition, a separate structural steel design was pre-

pared by an outside engineer. Then all three designs were submitted to contractors for preliminary pricing.

The results are shown on the opposite page. Reinforced concrete won hands down. It offered a clear saving of 6.76% of the general contract cost, or \$270,038.00! Furthermore, reinforced concrete used 2,350 fewer tons of steel, urgently needed for national defense.

Savings like these are typical of those realized by builders all over the country with reinforced concrete. And reinforced concrete *is not only* economical... it is inherently firesafe, and provides a permanent, rugged structure which is highly resistant to wind, shock, and quakes.

**On your next structure, design for reinforced concrete!**



**ARCHITECTS:** Backus, Crane & Love;  
**MECHANICAL ENGINEERS:** Beman & Candee;  
**STRUCTURAL ENGINEER:** James N. De Serio, P.E.

# saved...\$270,038.00

## AND 2,350 TONS OF STEEL

### BY BUILDING WITH

# REINFORCED CONCRETE

#### COSTS PER SQUARE FOOT (Preliminary Designs)

	Concrete Frame	Steel Frame Design #1	Steel Frame Design #2
Engineer's Estimate.....	\$1.825	\$2.335	\$2.302
Contractor A, N. Y. C....	1.68	.....	.....
Contractor B, N. Y. C....	1.81	.....	.....
Contractor C, Buffalo....	1.945	2.499	2.41
Contractor D, Buffalo....	2.178	.....	2.053
Contractor E, Buffalo....	No estimate, but stated concrete was cheaper		

#### ESTIMATED STEEL (Tons)

	Steel Frame	Concrete Frame
Structural steel .....	3,400	0
Shelf angles for lintels...	200	100
Reinforcing steel .....	800	2,100
Total .....	4,400	2,200*

\*Actual design requirements were 2,050 tons—a net saving of 2,350 tons of steel.

GET THE  
FULL STORY

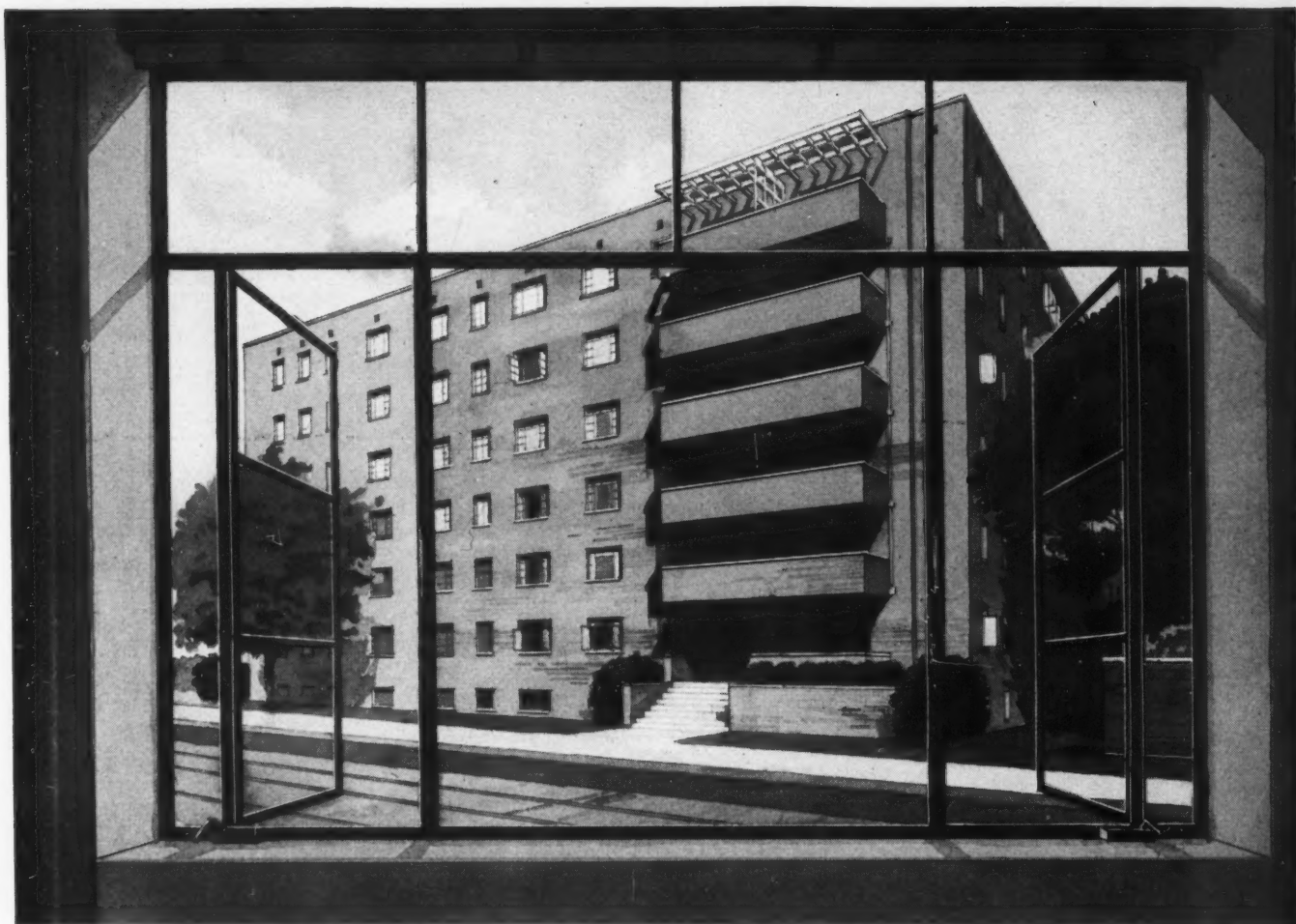
—SEE PAGES 35-39  
OF THE JANUARY 3  
ISSUE OF ENGINEERING  
NEWS-RECORD

#### SAVING IN FRAMING COSTS

Low structural steel estimate .....	\$2.053 per sq ft
Low concrete estimate	1.680
Saving .....	0.373
For 616,644 sq ft of supported floor area:	
Saving in framing costs...	\$230,008
Saving in brickwork .....	28,030
Saving in plaster, partitions, etc. ....	12,000
Total indicated saving....	\$270,038

### CONCRETE REINFORCING STEEL INSTITUTE

38 South Dearborn Street, Chicago 3, Illinois



*Fifth-Neville Apartments, Pittsburgh, Pa.  
Architect: Philip Friedman, Pittsburgh, Pa.  
Contractor: McCloskey & Co., Pittsburgh, Pa.  
Windows: Lupton Aluminum Casements*

Make your next residential project more livable — more rentable — more salable with Lupton Residential Casement Windows. Here is the window "favorite of the ages" in modern form, with slim frames and muntins that offer minimum visual interference. Made of long lasting steel or aluminum, Lupton Casements are engineered for strength, functional beauty and permanent weathertightness.

Do future owners a favor — give them windows that will not warp, shrink, swell or rot . . . that can be

cleaned on both sides from within the building . . . that allow 100% benefit of the window opening . . . that encourage fresh air with out-swinging ventilators to direct air currents into the room. Windows that will need a minimum of care through the years.

Lupton Casements are available from coast to coast in Aluminum or Steel, with unlimited design possibilities for "custom-look" windows assembled from stock units. Write for the new Lupton Catalog or see it in Sweet's.

**MICHAEL FLYNN MANUFACTURING COMPANY**  
700 East Godfrey Avenue, Philadelphia 24, Penna.

*Members of the Metal Window Institute and Aluminum Window Manufacturer's Association*

# LUPTON

## METAL WINDOWS



# THE RECORD REPORTS

## ENJOYING NEW YORK IS MAJOR ITEM ON A.I.A. CONVENTION AGENDA

A STREAMLINED PROGRAM for the 84th annual convention of the American Institute of Architects June 24-27 in New York City was fast taking shape last month, as Arthur C. Holden, F.A.I.A., and his committee planned a schedule that will allow visiting architects a maximum of time for private enjoyment of the Institute's first New York convention in 27 years.

It was already known that Hugh Ferriss, New York architect, will give the convention's closing address on "The Architect and the Improvement of American Cities." At the annual banquet August Perret of France, who will receive the A.I.A. Gold Medal for 1952,

will discuss the significance of progress in reinforced concrete design. Other speakers were to be chosen to contribute to the convention's general theme—the importance of architecture in forming environments for human activity.

### Medalists Named

Topics to be covered in the convention's technical seminars include prestressed concrete; thin-shell vault and dome construction; prefabricated structural unit construction in concrete; reinforced brick masonry; aluminum as a structural frame material; and trends in structural design theory applied to reinforced concrete and steel.

The annual awards besides the Gold Medal will bring the Craftsmanship Medal to George Nakashima, furniture maker and designer, of New Hope, Pa.; the Edward C. Kemper Award to William Stanley Parker, architect, of Boston; and the Fine Arts Medal to Marshall Fredericks, sculptor.

A series of exhibits intended to focus public attention on architecture as well as to interest visiting architects will be held throughout the New York metropolitan area, with the major show, "Engineering Contributions to Architectural Design, 1851-1951," scheduled for display at Lever House.

(Continued on page 12)

## THIRD QUARTER STEEL ALLOTMENTS CONFIRM NPA PROMISE ON COMMERCIAL CONSTRUCTION

THIRD QUARTER STEEL ALLOTMENTS allowing considerably more than twice as much structural steel for commercial construction as available in the second quarter have been welcomed as definite implementation of the National Production Authority's new relaxed policy on construction.

The Facilities and Construction Bureau, which processes applications for commercial building, got 40,000 tons of structural steel for the third quarter, against 16,285 tons in the second and 12,179 in the first. School and hospital building also got a push, with an increase of the allotment to the Federal

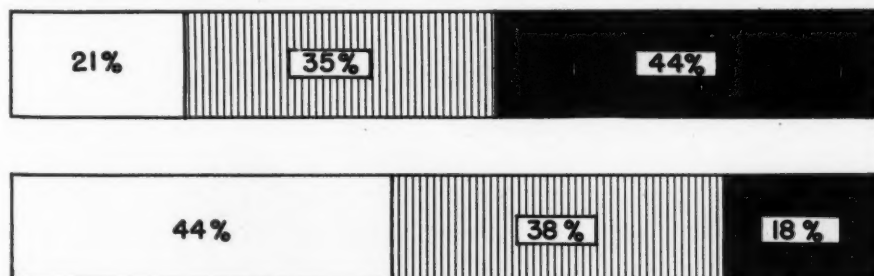
Security Agency from 29,235 tons in the second quarter to 40,000 in the third for schools, and 18,315 in the second quarter to 25,000 in the third for hospitals.

### More Easing to Come

According to NPA, before the third quarter begins, another adjustment in CMP Regulation 6 governing construction will up the self-authorization allowance for primary and secondary schools from five to 50 tons of carbon steel (including seven instead of two of structurals) and from 200 lb of copper or, as a copper substitute, 100 lb of aluminum, to 1000 lb of copper and 1000 lb of aluminum.

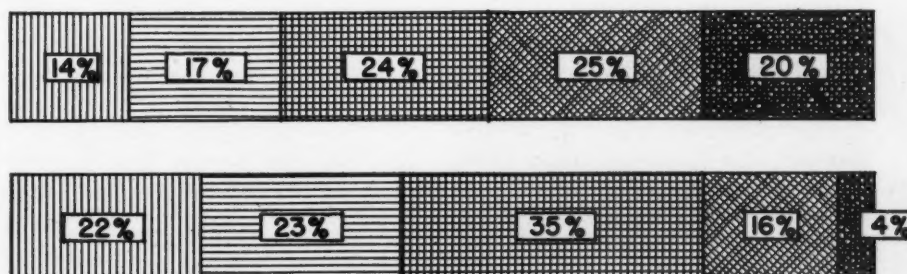
As expected, the Federal Communications Commission lifted its ban on new television channels. NPA had promised to make materials available for new stations; and relaxation of the strict ban on the whole category of amusement construction was being considered.

## SCHOOL PLANTS: SATISFACTORY, FAIR, UNSATISFACTORY



Charts from Federal Security Agency's report on School Facilities Survey give some idea of potential in school construction field. Above: top line, elementary schools, bottom line, secondary; white box means satisfactory; vertical lines, fair; black box, unsatisfactory. Right: top line for elementary, bottom for secondary; boxes show (left to right) less than 11 years; 11-20 years; 21-30 years; 31-50 years; and over 50 years

## AGE OF SCHOOL BUILDINGS



**1952 CONVENTION** (Cont. from p. 11)  
**39 New A.I.A. Fellows Named**

Max Abramowitz, New York — Design; C. Storrs Barrows, Rochester, N. Y. — Public Service; Welton D. Becket, Los Angeles, Cal. — Design; Kenneth C. Black, Lansing, Mich. — Service to the Institute; Walter Carlson, Wilmington, Del. — Public Service; George Wallace Carr, Chicago — Design and Science of Construction; Birge Malcolm Clark, Palo Alto, Cal. — Public Service and Service to the Institute.

Pendleton S. Clark, Lynchburg, Va. — Service to the Institute; Charles P. Crowell, Bangor, Maine — Public Service; Herman L. Duhring, Germantown, Pa. — Design and Education; Max Foley, New York — Service to the Institute and Science of Construction; Robert Benjamin Frantz, Saginaw, Mich. — Public Service and Service to the Institute; James Herbert Gailey, Atlanta, Ga. — Education; M. Edwin Green, Harrisburg, Pa. — Design and Public Service; Lawrence Hill, University City, Mo. — Design; Robert Hutchins, New York — Design; Francis B. Jacobberger, Portland, Ore. — Public Service; Eugene Herbert Knight, Birmingham, Ala. — Public Service and Education; Thomas Hall Locraft, Washington, D. C. — Design.

Maynard Lyndon, Los Angeles — Design; Walter Frederic Martens, Charleston, W. Va. — Service to the Institute and Public Service; Dale Robert McEnary, Minneapolis — Service to the Institute and Public Service; Robert McLaughlin, New York — Design and Science of Construction; Warren D. Miller, Terre Haute, Ind. — Public Service; Harold Henry Munger, Toledo — Public Service.

Allan H. Neal, Pittsburgh — Service to the Institute; Addison Stayton Nunn, Houston — Public Service; James O'Connor, New York — Design; Noah Webster Overstreet, Jackson, Miss. — Design; Clyde Collins Pearson, Montgomery, Ala. — Design; Alfred Easton Poor, New York — Design and Public Service; Antonin Raymond, New York — Design and Science of Construction; Arthur Neal Robinson, Atlanta, Ga. — Service to the Institute; Eero Saarinen, Bloomfield Hills, Mich. — Design; Harvey A. Schwab, Pittsburgh — Service to the Institute; Cyrus Edgar Silling, Charleston, W. Va. — Service to the Institute; Delos Hamilton Smith, Washington, D. C. — Education; Lucius R. White Jr., Baltimore — Public Service and Service to the Institute; L. Morgan Yost, Kenilworth, Ill. — Design.

**IN 1952 AS IN 1925,**

Ezra Stoller



Lawrence G. Heinrich

New medical centers: 1925, Columbia Medical Center (immediately above), James Gamble Rogers, Architect; 1952, New York University Medical Center (photo of model, top, shows how it will look at completion); Skidmore, Owings and Merrill, Architects

Sigurd Fischer

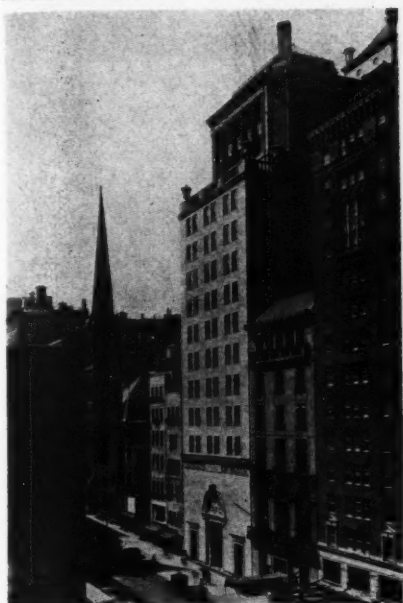


New hotel, 1925: Hotel Shelton, Lexington Avenue and 49th Street, won two gold medals—one from the Architectural League of New York and one from the American Institute of Architects; Arthur Loomis Harmon, Architect

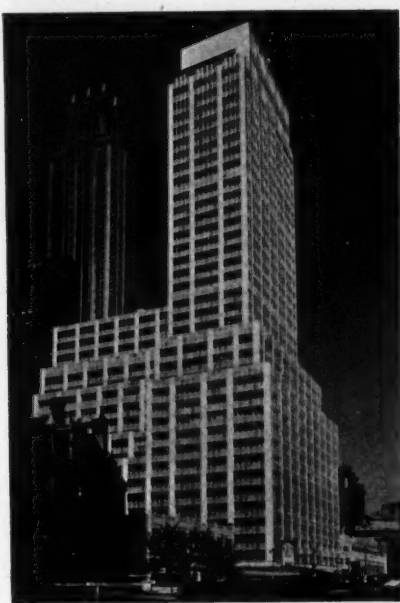


## VISITING ARCHITECTS LOOK FOR THE NEW BUILDINGS

Architectural Record



Michael Miller



**HIGH ON THE LIST** of most architects who come to New York for the A.I.A. convention in June will be their own personal tours to new buildings in the area.

The buildings they'll make sure to see will vary with different interests, necessities and energies, although two — the United Nations Building and Lever House — are pretty sure to be on everybody's list.

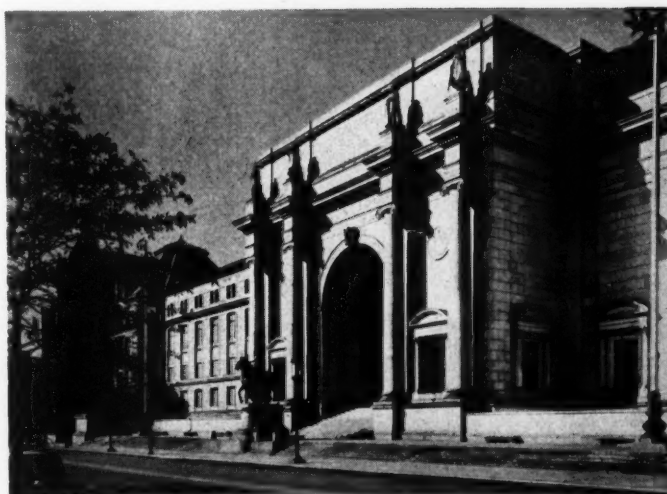
The RECORD has dug into its 1925 files to turn up some New York buildings which were big news when the last New York convention of the A.I.A. was held. Photographs of some of these, together with photographs of some buildings that are sure to rate visitors from this year's convention, are reproduced on these pages.

Sigurd Fischer

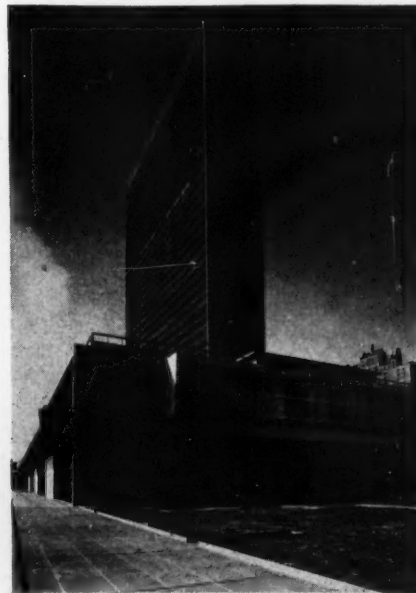


News in 1925 was the Steinway building (center in photo above left); Warren & Wetmore, Architects. One of today's many new office buildings (above right): 101 Park Avenue; Kahn & Jacobs, Architects. Left: Fresh Meadows (Queens, N. Y.), a new housing development designed for people; Voorhees, Walker, Foley & Smith, Architects. Below: designs for monumentality. 1925 — facade of Theodore Roosevelt Memorial wing, American Museum of Natural History; John Russell Pope, Architect; 1952, United Nations building, looking toward newly completed Conference Building; United Nations Headquarters Planning Commission, Wallace K. Harrison, Director, Architects

American Museum of Natural History



Joseph W. Molitor







#### **"HONESTLY ARROGANT" F.L.L.W. RESTATES LIFELONG CREED**

Frank Lloyd Wright, in New York to oversee preliminaries to his Guggenheim Museum, was guest of honor at luncheon given by Thomas S. Holden, president of F. W. Dodge Corp. Wright, who remarked "I early decided that an architect must be either honestly arrogant or hypocritically humble," noted that his Credo, written 58 years ago and first published in ARCHITECTURAL RECORD in 1908, has never changed (see pages 148-154). At left: Mr. Holden; A.I.A. Regional Director Arthur Holden; Mr. Wright; and Francis Keally, New York A.I.A. Chapter president

Tommy Webber

#### **NEW ENGLAND ARCHITECTS MEET TO NOMINATE REGIONAL DIRECTOR**



Lanscraft

At last month's Boston meeting of the New England Council of Architects Philip Creer was nominated for New England Regional Director of A.I.A. In photo at left above: (seated) Samuel M. Morino, Rhode Island Chapter president; Harold B. Willis, retiring regional director; Eugene Kennedy, Massachu-

setts Chapter president; (standing) Alonzo Harriman, Auburn, Maine; Eugene Magenau, New Hampshire Chapter president; Preston Cole, Vermont Chapter president; and William J. Provost, Connecticut Chapter president. At right above: Mr. Willis congratulates Mr. Greer, also new Council secretary-treasurer

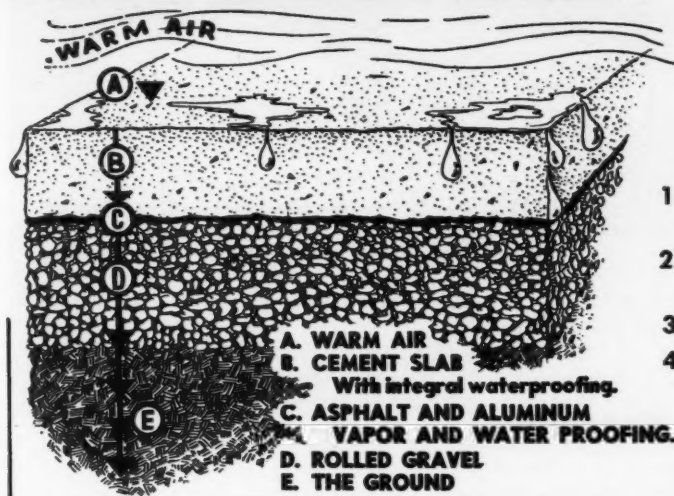


Piaget Studio

#### **ARCHITECTS AND PRODUCERS GET TOGETHER IN ST. LOUIS**

St. Louis Chapter of the American Institute of Architects kicked off a lively new activity program by holding a joint dinner meeting with the local chapter of the Producers' Council. Against backdrop provided by building products exhibit: Robert Elkington, St. Louis A.I.A. secretary; William A. Grolock, St. Louis A.I.A. president; A. Naughton Lane, national president of the Producers' Council; Edmund R. Blaschke, president of the St. Louis Chapter of the Producers' Council

## No waterproofing will prevent wet concrete floors



"Dampness on concrete floors is more often due to moisture from the air than from the ground. No amount of waterproofing beneath the slab will prevent this trouble."

From a "Progressive Architecture" Research Report, "Insulation for Concrete Floor Slabs on Grade."

1. The air (A) in immediate contact loses heat by conduction to the concrete (B).
2. The concrete (B) conducts heat through the layer of asphalt AND aluminum (C) to the gravel (D).
3. The gravel (D) conducts heat to the ground (E).
4. As the contacting air (A) loses heat, its capacity to retain water vapor is diminished. The excess condenses on the upper surface of the concrete floor.

### THE EXPLANATION:

- (1) Cold air can support little vapor. The excess falls out as water, or condensation, dew, etc.
- (2) By direct conduction through and between solids, heat flows through the concrete floor into the earth, the flow in conduction being from warm to cold.
- (3) Similarly, by conduction, heat flows out of the air in immediate contact with the colder concrete. That layer of air can no longer support all the vapor in it, so the excess condenses.
- (4) The process of extracting heat out of the air at the upper surface of the concrete is continuous, and so is the formation of condensation.

Multiple sheets of accordion aluminum, *underneath* the floor, reflect back 97% of RADIATION. The air spaces permit only about 5% heat flow by CONDUCTION. There is of course no CONVECTION downward. Therefore with practically no heat loss, the concrete tends to follow air temperatures, and remains above the dew point. Ordinary insulations, being dense, are better conductors of heat. They are made more dense, still better conductors of heat, by the crushing weight of concrete, by inner condensation formation, and by ground dampness.

The commercial forms of multiple sheets of accordion aluminum are Infra Insulation Type 6, Type 4 and Type 4 Jr. (The built-in reflective air spaces are permanent.)

For new and inexpensive techniques in insulating floors and concrete slabs against heat flow loss, and condensation, as well as ceilings and walls, obtain FREE the revised fifth edition of "Simplified Physics of Vapor and Thermal Insulation." Use coupon below.

#### INFRA THERMAL FACTORS, DOWNHEAT FLOW

Type 6 C.044 R22.72 equals 9" DRY Rockwool  
Type 4 C.065 R15.38 equals 6" DRY Rockwool  
Type 4 Jr.\* C.097 R10.30 equals 4 1/2" DRY Rockwool  
\*In 1" Space

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☐ Send Prices of Infra Insulations ☐ Send Sample

# Installation and Specification Data

## Watrous Flush Valves for...

### THE NEW WALL-HUNG *Sanistand* FIXTURE

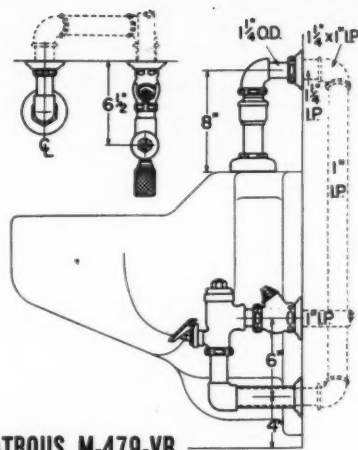
Latest version of the American-Standard  
urinal for women's toilet rooms

Here are the Watrous Flush Valve Combinations recommended for use with the new wall hung Sanistand urinal made by American Standard. They have been worked out in cooperation with the fixture manufacturer to provide the proper flush and refill.

These Watrous Combinations are available for manual or foot pedal operation, for either exposed or concealed installations. All exposed parts are heavily chrome-plated; concealed valves are rough finished.

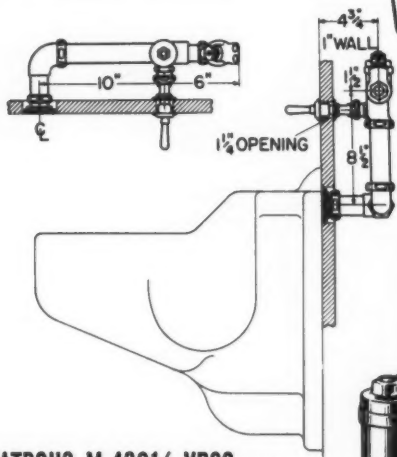
The flush valves themselves, of course, offer all those basic Watrous superiorities — water-saving adjustment, self-cleansing by-pass, self-tightening handle packing and single-step servicing. Screenless silent action can be furnished at slight additional cost.

Write for Type "S" data sheets covering  
Watrous Flush Valves for both wall hung  
and floor model Sanistand Fixtures.



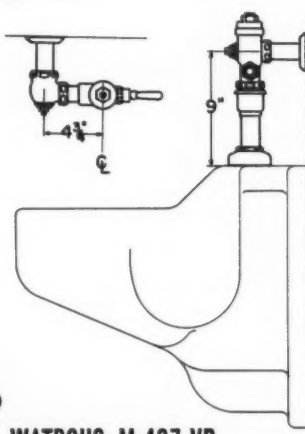
**WATROUS M-479-VB**

Pedal-operated exposed flush  
valve, top spud connection.



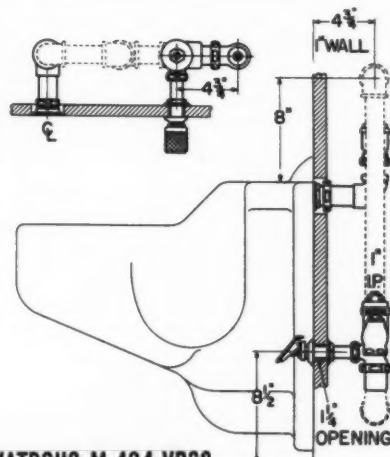
**WATROUS M-439 1/2-VBSS**

Manually-operated concealed flush  
valve, back spud connection.



**WATROUS M-497-VB**

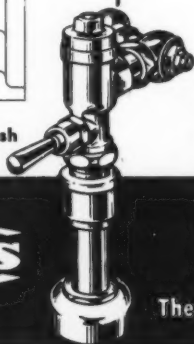
Manually-operated exposed flush  
valve, top spud connection.



**WATROUS M-494-VBSS**

Pedal-operated concealed flush  
valve, back spud connection.

## Watrous



**ADJUSTABLE FLUSH VALVES**

BOTH DIAPHRAGM AND PISTON TYPES

The Imperial Brass Manufacturing Co., 1240 W. Harrison St., Chicago 7, Ill.



## BUILDING COORDINATOR: VICTORY COMES LATELY

AS THE CONTROLS OUTLOOK EASES, Defense Production Administration policy has at last incorporated the recommendation most frequently urged upon it by all segments of a bewildered construction industry in the darkest days of building curbs.

The appointment of John H. Martin, president of the United Lumber Yards of Modesto, Calif., as deputy administrator in charge of construction and resources expansion for DPA provides the instrument for coordination of DPA policy on construction vigorously sought in a long series of industry efforts led by the American Institute of Architects.

The office Mr. Martin heads has until now been known as "Office of Resources Expansion" and the addition of the word "Construction" to the title is the explicit expression of the industry's belated victory.

Barring the movement of the economy into more stringent circumstances requiring tightened controls, however, the victory is more nostalgic than significant. For since the time industry segments were plumping for this coordination of policy on construction, a series of actions by the controlling agencies has greatly relaxed the regulations over the building of commercial types and some industrial projects. Further lifting of bans on structural and carbon steel were expected for third quarter operations, extending into the home construction field.

### Policy Function Stressed

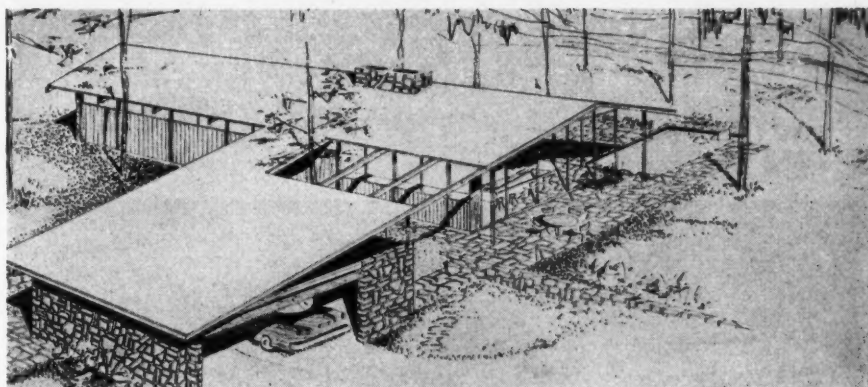
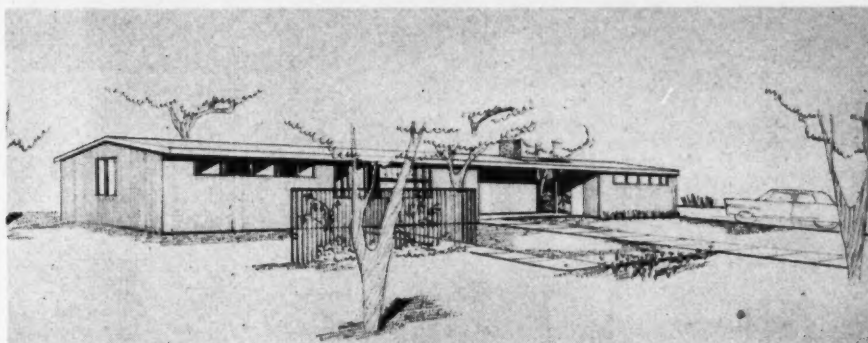
In announcing Mr. Martin's appointment, DPA Administrator Manly Fleischmann said one of the most important functions of the new office will be that of acting for him (Fleischmann) in all DPA areas of industrial expansion and construction "for the development of policies within these fields."

The DPA announcement made it clear that the former office of resources expansion had been changed to the new title—including construction for the first time—to encompass the new activities of this DPA division and its own administrator.

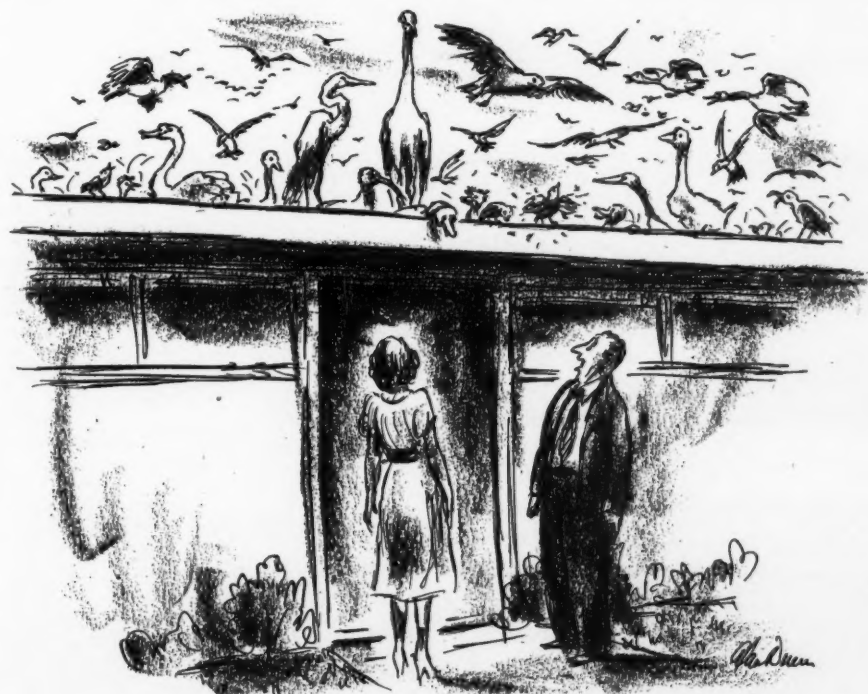
### King Takes New Post

Mr. Martin succeeded James F. King. It was expected that Mr. King would move into the office of Gabriel J. Ticoulat, who had ended his term (starting October 2, 1951) as deputy DPA administrator for international activities and defense materials.

## REAL ESTATE DEVELOPER PROVIDES ARCHITECTS' PRIZES



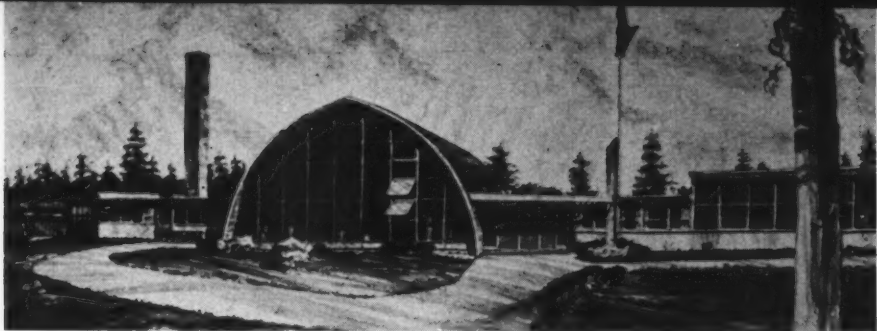
\$1400 in prize money contributed by a Birmingham, Mich., real estate developer, Howard T. Keating, made possible the Small House Competition recently sponsored by the Michigan Society of Architects. First prize entry (top photo) was submitted by Gordon A. Sheill, A.I.A., and Harold Binder, designer, both of the office of Albert Kahn Associated Architects and Engineers. Second prize winner (directly above) was the design of Charles D. Hannan, A.I.A., and Herbert L. Hawthorn, designer. Third prize went to Morris Jackson of Smith, Hinchman and Grylls, Architects and Engineers



— Drawn for the RECORD by Alan Dunn

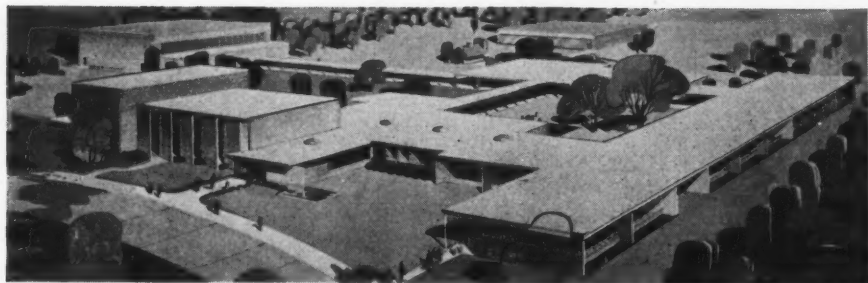
"Is this a water-cooled roof or a bird bath?"

1



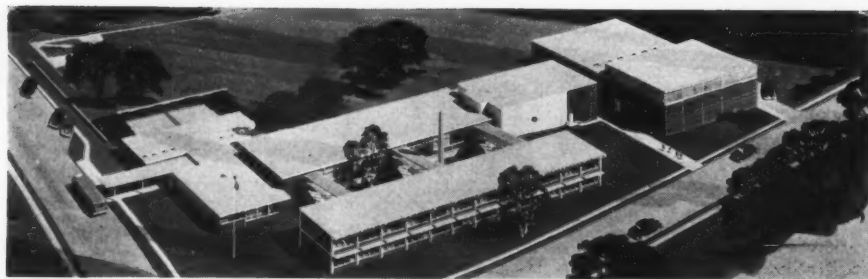
Fay

2



Alt-Lee

3

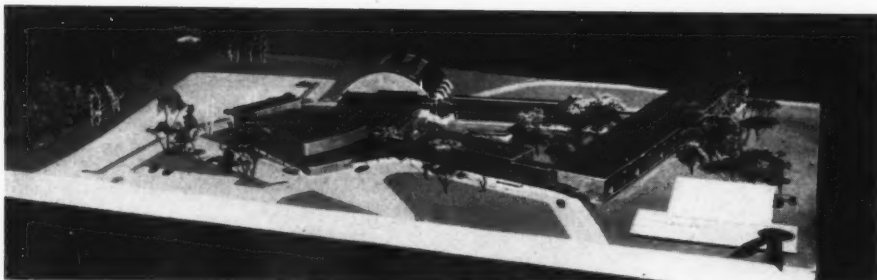


4



Fay

5



Fay

6



Julius Shulman

## SIX SCHOOLS GET AWARDS IN AASA BOSTON EXHIBIT

THE LAST OF THREE regional meetings was held last month at Boston by the American Association of School Administrators, which holds regional meetings instead of a national convention every third year. This year's series held architectural exhibits, co-sponsored by A.I.A., with each meeting. A.A.S.A. had previously held only one such exhibit at a regional convention.

Architects across the country were free to submit their projects in any or all of the three exhibits; and one school (see below) in fact won Awards of Merit in all the regional contests.

Projects which received Awards of Merit in the Boston exhibit are shown on this page. Awards of Merit were given at the earlier meetings as follows:

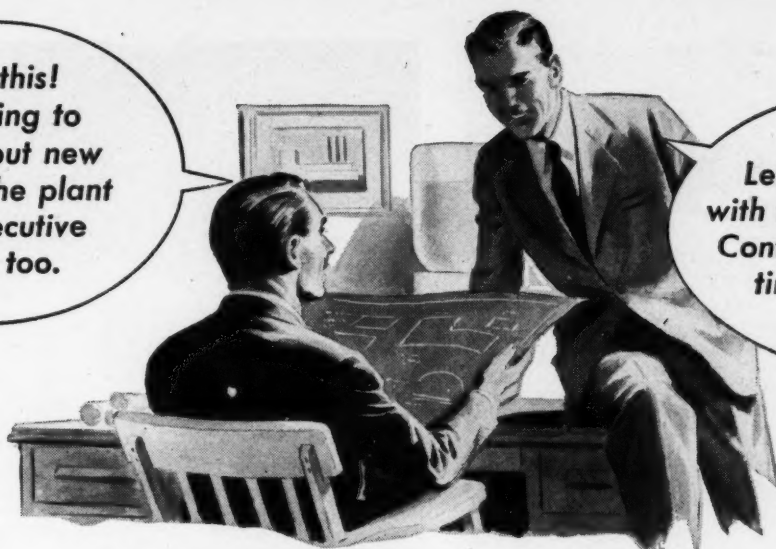
*St. Louis* — Westwood Elementary School, Stillwater, Okla., Caudill, Rowlett & Scott, architects; Sunshine School, Fresno, Cal., David Horn & M. D. Mortland, architects; Clayton, Mo., High School, William B. Ittner Inc., architect; Oak Ridge, Tenn., Senior High School, Skidmore, Owings & Merrill, architects; Lee Elementary School, Manhattan, Kans., F. O. Wolfenbarger & Assocs., architects.

*Los Angeles* — William Penn Elementary School, Whittier, Cal., William H. Harrison, architect; Sunshine School, Fresno, Cal., David Horn & M. D. Mortland, architects; Katherine Delmar Burke School, San Francisco, Donald Beach Kirby and Thomas Mulvin, architects; John Muir Elementary School, Contra Costa County, Cal., John Lyon Reid, architects; Long Beach, L. I., Elementary and Junior High School, Reisner & Urbahn, architects.

Award of Merit winners at the Boston meeting are shown at left (top to bottom): 1—Bar Harbor, Me., Elementary School, Alonzo Harriman, architect; 2—Langley-Bath-Clearwater High School, Aiken County, S. C., Lyles, Bissett, Carlisle & Wolff, architects, Engelhardt, Engelhardt & Leggett, associates; 3—Meadow Drive Elementary School, Albertson, N. Y., Ketchum, Gina & Sharp and Louis Shulman, architects; 4—Chandler Street Junior High School, Worcester, Mass., The Architects Collaborative and G. Adolph Johnson, architects; 5—East Hartford, Conn., High School, Nichols & Butterfield, Perkins & Will, architects; 6—Sunshine School, Fresno, Cal., David Horn and M. D. Mortland, architects



Look at this!  
We're going to  
have to put new  
floors in the plant  
and executive  
offices, too.



Let's get in touch  
with the Kentile Flooring  
Contractor. He'll save us  
time and money.

## You and your client both profit when you call in the Kentile Flooring Contractor

THE MOST important differences between various types of flooring are those that don't appear on the surface... that's why it takes an expert to decide whether a certain floor belongs in a certain installation!

The Kentile Flooring Contractor is that expert... a technically trained and experienced man who is fully qualified to select just the right floor... the one floor that will provide the longest life at the lowest cost...

as well as minimum maintenance expenses.

Whether your flooring problem is one room in a home or store... or thousands of square feet in a factory, warehouse or office, it will pay you to call in the Kentile Flooring Contractor. For his name, look under FLOORS in the classified pages of your phone book... or write Kentile, Inc., 58 Second Ave., Brooklyn 15, New York. In Canada, T. Eaton Co., Ltd.



• Where rugged, extra-heavy duty flooring is required, the first choice is SPECIAL (grease-proof) KENTILE... its colorful beauty resists the wear of constant exposure to industrial and cooking greases and oils, alkali, alcohols and most acid solutions. It is of special value in providing long-range economies in installations like the one shown here; restaurants and cafeterias; light manufacturing areas; laboratories; and garages. SPECIAL (grease-proof) KENTILE can be installed over any smooth, firm interior surface... even below grade over concrete in direct contact with the earth.

**KENTILE • SPECIAL (greaseproof) KENTILE • KENRUBBER • KENCORK**



**KENTILE INC.**

KENTILE, INC., 58 Second Avenue, Brooklyn 15, New York • 350 Fifth Avenue, New York 1, N. Y. • 705 Architects Building, 17th and Sansom Streets, Philadelphia 3, Pennsylvania • 1211 NBC Building, Cleveland 14, Ohio • 225 Moore Street, S.E., Atlanta 2, Georgia • 2020 Walnut Street, Kansas City 8, Missouri • 1440 11th Street, Denver 4, Colorado • 4532 South Kolin Avenue, Chicago 32, Illinois • 1113 Vine Street, Houston 1, Texas • 4501 Santa Fe Avenue, Los Angeles 38, California • 95 Market St., Oakland 4, Calif. • 452 Statler Building, Boston 16, Mass.





**"Sold 125 G-E houses—each with  
G-E Kitchen-Laundry!"**

Here's Mr. Arthur Oman of Weymouth Heights, Mass. who sold 125 houses within 10 days. He says: "I'm sold on the G-E Kitchen-Laundry in new homes just as Mrs. Duffy is!" Mrs. Duffy (also above) says: "All my friends wish they had a G-E Kitchen-Laundry for just that extra \$3.50 a month!"



**His General Electric equipped projects  
won an N.A.H.B. award!**

Mr. Herbert Tandy (above) and his associates, Messrs. Norman Tandy and Alan D. Allen, are builders of the Saddle-Wood Hills Development in Hillsdale, New Jersey. N.A.H.B. stated: "The projects presented were a great credit; sound planning, ingenuity, and market-appeal were *all* in evidence."

## Again in 1952, architects and builders are specifying and featuring the **G-E Kitchen-Laundry!**

**Your plans and houses will have much greater acceptance when women see all the wonderful, timesaving equipment, and learn that it adds as little as \$3.50 a month extra to regular monthly mortgage payments!**

Here you see photographs of six successful builders from various sections of the country calling back on women who purchased houses from them months previously.

"Call-backs" convinced these builders—*more than ever*—that it pays to feature the G-E Kitchen-Laundry in the houses they build.

We believe success stories such as these definitely indicate that G-E Kitchens and Laundries should be specified and built into all new homes, *regardless of price range.*

*Isn't it time you, too, took a good look at these facts?*

1. You know that most women want—and expect—convenient, timesaving kitchen and laundry appliances in their new homes.
2. When these appliances bear the General Electric

nameplate, prospects become more quickly sold on the plans and house because they're well-acquainted with General Electric products. They know they are the very finest appliances available. They associate the quality of the appliances with the entire specifications and construction of your houses.

3. Even families with \$50-a-week income enjoy the comfort of a G-E equipped Kitchen-Laundry! That's because . . .

4. The buyer pays as little as \$3.50 a month more on his regular monthly mortgage payments.

**Whether you plan or build 1 or 1000 houses . . .**

. . . they will have greater acceptance if they're equipped with *matched* General Electric appliances.

Complete specifications for General Electric Kitchen and Laundry equipment are given in Sweets Catalogue, Section 24.

See your local G-E distributor, or write to the Home Bureau, General Electric Co., Louisville 2, Kentucky.



**"G-E equipment gives us a distinct advantage over competition!"**

Here's Mr. Clarence M. Lemon, builder of Wichita, Kansas homes who says: "We sold our entire project of 49 houses the very first day. We included the General Electric Kitchen-Laundry because we felt it gave our homes a distinct advantage over others selling in about the same price range."



**"It's the clincher that helped us close 156 contracts!"**

Mr. Edwin I. Abbott of Lyons, Illinois says: "The complete G-E Kitchen-Laundry in our 'House of Charm' homes was the clincher that helped us close 156 contracts in one week end. A woman is really sold when she sees General Electric Appliances included as a part of the complete house package."



**"Sold 100 G-E houses—mostly to people with \$50 to \$70 incomes!"**

Here's Carl B. Anderson of Virginia, Minn. who sold 100 houses with G-E Kitchen-Laundry during the past three years. He says: "It was the kitchen-planning service offered by the local G-E distributor that first interested me in including the G-E Kitchen-Laundry in my houses."



**"57 sold the first day . . . rest sold themselves!"**

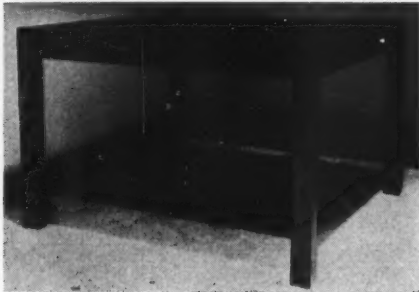
Here's Mr. Chas. A. Mohr, president of the Builders Assn. of Maryland. He says: "No matter what the price range may be, women *do* expect to see General Electric equipment in the kitchen, or else they're not keenly interested. It's no secret: G-E Kitchens sell my houses!"

**GENERAL**  **ELECTRIC**

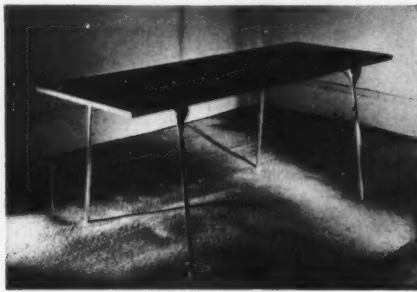


## DESIGN TRENDS: THE "GEOMETRIC" AND THE "ORGANIC"

Museum of Modern Art



Edith Hernandez & Co. Interiors



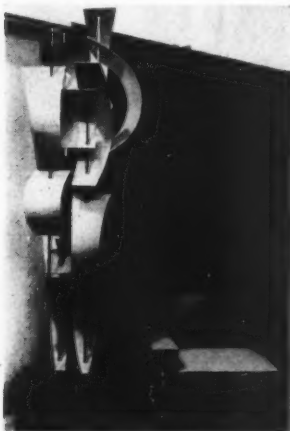
Museum of Modern Art



New York's Museum of Modern Art has taken a reflective look at modern design and come up with a small but provocative exhibit (current till June 1) which it calls "Design Trends." It consists of 11 pairs

of objects, one of each set designed 20 years or so ago and one quite recently, which the Museum suggests reflect a trend in design from purely geometric to "expressive, organic shapes." Above: far

left, Ludwig Mies van der Rohe's mahogany table (1930) and (next) slate and bronze table by Edith and William Hernandez (1949); chairs by Le Corbusier (1928) and (at right) Finn Juhl (1946)



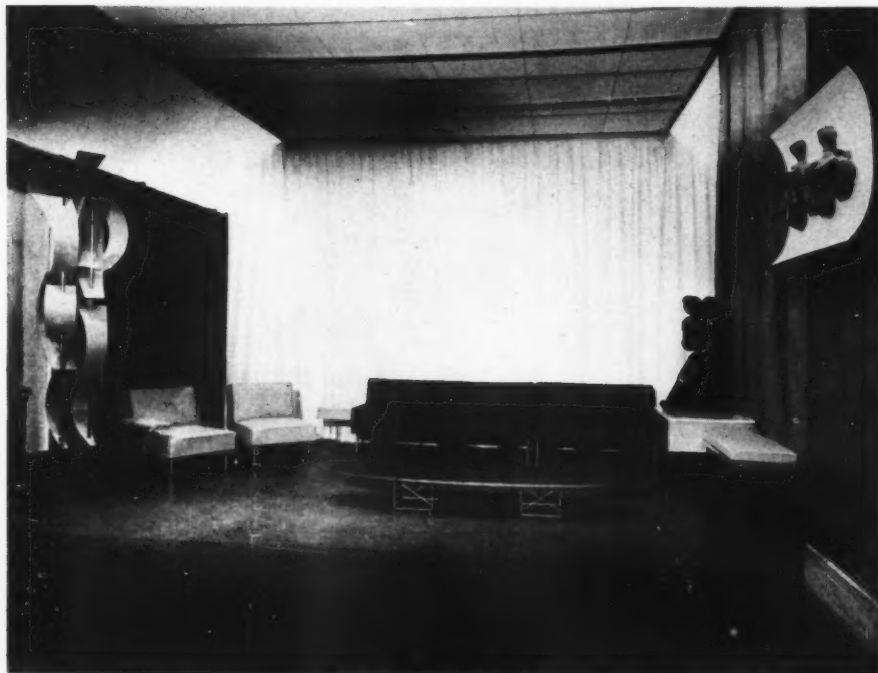
### EXHIBIT SHOWS SCULPTURE IN EVERYDAY SETTINGS

THE SCULPTORS' GUILD used its 1952 annual exhibition, which begins a nationwide tour this month, to show how sculpture can be used in ordinary surroundings—a forthright approach to the problem of accustoming at least some portion of the public to the idea that sculpture does not belong exclusively in museums and palaces.

Settings designed by eight architects and decorators for the New York showing at the American Museum of Natural

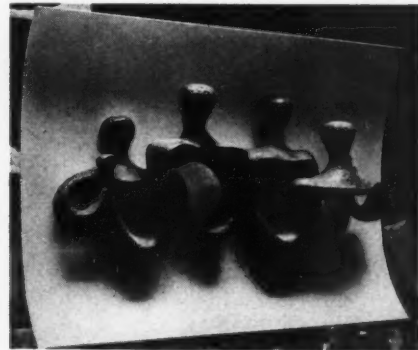
History included an airport waiting room, a motion picture theater lobby (photo below), two contemporary living rooms, a chapel, a hall, a store window and a garden.

Architects who did settings were Victor Proetz, William Lescaze, and William McKnight Bowman, all of New York; Leo A. Daly, Omaha. Other designers: William Pahlmann, Jessie Earnshaw and Gene Moore, all of New York, and Christopher Castou, Townshend, Vt.



Erich Kastan

Lescaze used three pieces of sculpture in theater lobby (above). Photos of individual pieces show (top) plywood "sailor" by Harold Ambellan; (top right) plaster "Dancers" by Joseph Konzal; (below right) rosewood "Mother and Child" by Humbert Albrizio





*It's the Staying Power that Counts!*

...and in a Roof Deck

**ONLY STRUCTURAL CONCRETE  
HAS THAT STAYING POWER**



**FEDERAL-  
Featherweight  
PRECAST  
STRUCTURAL  
CONCRETE  
ROOF SLABS**

Chicago Transit Authority  
Bus Garage with an area  
of 68,000 sq. ft. of Federal  
Featherweight STRUCTURAL  
CONCRETE Precast  
Roof Slabs. Archt. Battey &  
Childs; Contr. Joseph J.  
Duffy Co., both Chicago.

Your first requisite for a good roof deck must certainly be STRUCTURAL soundness. In the battle against the destructive forces of both man and the elements—steam, smoke, cinders, gases, fumes, water, heat and cold—there just is no place for a roof deck of impermanent materials.

Because Federal-Featherweight STRUCTURAL CONCRETE Precast Roof Slabs are completely impervious to all of these effects, it is evident that these slabs will far outlast any roof deck that is subject to deterioration.

Federal is unaffected by moisture within or without the building. It cannot rot, rust or disintegrate. THERE IS NO MAINTENANCE, EVER! It is not only strong, but lightweight, firesafe, and with a beautiful, satin-smooth underfinish. It has no equal today for true, overall economy. *Catalog on request.*

CHANNEL ROOF DECK SLABS for  
use with composition covering.  
NAILING CONCRETE SLABS to  
hold securely, slate, tile, copper  
or other ornamental roof.

St. Joseph School, Chicago, covered  
with 8,000 sq. ft. of Federal-Feather-  
weight STRUCTURAL CONCRETE Pre-  
cast Roof Slabs. Archt. Edo S. Belli,  
Chicago; Contr. Herlihy Mid-Continent  
Co., Chicago.



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FOR FORTY-FIVE YEARS

SALES OFFICES IN PRINCIPAL CITIES

# Texas construction firm by setting

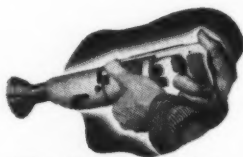


New 18-story office building for the Prudential Insurance Company of America, where Straus-Frank Co. used Remington Stud Drivers for fastening air ducts to concrete ceilings.

*It's fast, easy and safe to operate  
the Remington Stud Driver*



Simply hand-assemble stud and power cartridge, load as a unit in easy-to-open Remington Stud Driver, and close.



Press loaded Stud Driver firmly against surface, depress safety lever and pull trigger. Explosive charge imbeds stud solidly.

## LOOK AT ALL THESE FEATURES

**COMPACT AND PORTABLE**—Weighs only 5½ pounds, ideal for overhead work in inaccessible places.

**SPEED**—One man can set as high as 5 studs per minute on repetitive work at depths up to 2¾ inches, depending on material.

**ELIMINATES INVESTMENT** in outside power—completely self-powered.

**FOUR WAYS SAFE**—Plainly visible red dot indicator shows when Stud Driver is cocked; safety lever must be depressed before and during squeezing of main trigger; permanently attached safety shield must be compressed against work before Stud Driver will operate. If tilted at more than a slight angle, Stud Driver will not fire. Slight recoil. Low noise level.

**RUGGED**—All working parts of the Stud Driver are made of selected steels, cased in a strong aluminum-alloy housing. Lining of safety shield is a solid block of tough, resilient Du Pont neoprene.

**PRICE** for Model 450 Remington Stud Driver, complete in rugged steel carrying case—only \$119.50.





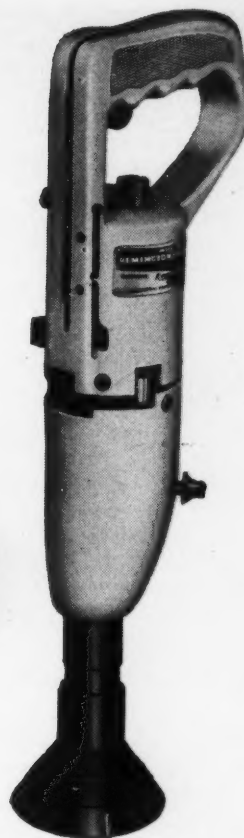
**saves over \$8,000**

**fastening studs with**

**NEW Cartridge-Powered Model 450**

# REMINGTON STUD DRIVER

**Revolutionary new tool sets studs  
in seconds... and does it safely!**



Construction job speeded at a substantial reduction in labor costs! That's the report from Straus-Frank Co., Houston, Texas, whose contract division used Remington Stud Drivers on a recent building project. In setting fastening studs for overhead air ducts, the Stud Drivers outproduced older methods eight to one... averaged 50 studs per hour, *including down time!*

Completely self-powered, the Remington Stud Driver needs no outside power source or extra equipment. The hinged construction of this lightweight fastening tool permits easy one-step loading—without the time loss of handling separate parts. Workmen like the Stud Driver's simple operation and safety features... Contractors like its lightning speed in firmly fastening steel or wood sec-

tions to concrete or steel. Studs have pull-out resistance as high as two tons!

The Model 450 Remington Stud Driver is made by Remington Arms Company, Inc., *America's oldest and foremost sporting arms manufacturer.* To obtain detailed information on this time- and money-saving tool, and for the name of your nearest distributor, mail the coupon below.

**Speed all these jobs... with Remington studs designed for the job!**

1. Fastening electrical fittings to concrete, steel and brick.
2. Hanging steel sash to concrete and brick.
3. Anchoring stadium and theatre seats to concrete.

4. Fastening wood to steel.
5. Anchoring wood plates to concrete floors and ceilings.
6. Hanging steel radiator housings to concrete or brick.



Only Remington studs are identified by this target trademark on the head.

#### STANDARD HEAD



#### BREAK-OFF HEAD



#### INTERNAL THREAD



#### EXTERNAL THREAD



*"If It's Remington—It's Right!"*

# Remington

DU PONT

Remington Arms Company, Inc.  
Industrial Sales Division, Dept. CE  
939 Barnum Ave., Bridgeport 2, Connecticut

I am interested in obtaining detailed information on the Model 450 Remington Stud Driver.

Name

Firm

Position

Address

City  State





Above: photo of scale model of five-story reinforced concrete office building, hotel or hospital type, typifying bomb damage. Below: "typical" bomb-damaged two-story and basement row house

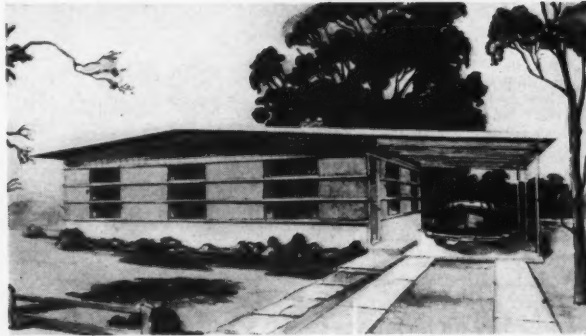


## CLIENT: FCDA; PROBLEM: DESIGN OF DESTRUCTION

THE RESCUE TRAINING CENTER now under construction for the Federal Civil Defense Staff College, Olney, Md., presented a unique problem—in a sense, design and construction in reverse.

Architects McLeod and Farrara of Washington, D. C., have designed a street of "destroyed" buildings for the FCDA's rescue-team training program. It includes a two-story and basement wood-frame house; two-story and basement row house; two-story office, store and theater building; three-story and basement office and apartment building; and a five-story reinforced concrete structure.

The design utilizes results of study of effects of high-explosive bombings in Great Britain and Germany and atomic bombings at Hiroshima and Nagasaki as well as post-war test explosions.



Gresham Construction Company, Santa Clara, Cal., and Knox Corporation, Thomson, Ga., sponsor identical unit—expandable two-bedroom house (left and below) consisting of two gable-end sections that can be carried on a low-bed truck to site, expanded with stressed-skin plywood panels to 25 x 32 ft

## HHFA HOLDING TEST RUNS ON DEMOUNTABLE HOUSING

THE HOUSING AND HOME FINANCE AGENCY is testing mobile and demountable housing for the defense program.

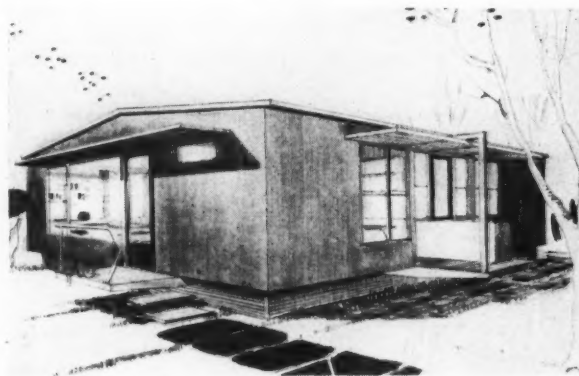
By the middle of this month, each of seven types will have had field tests in the first phase of the trial run program directed by Ralph Kaul, special advisor in the office of the Administrator.

"Temporary" housing that could be moved from areas of passing need to become acceptable long-term housing is what HHFA is after.

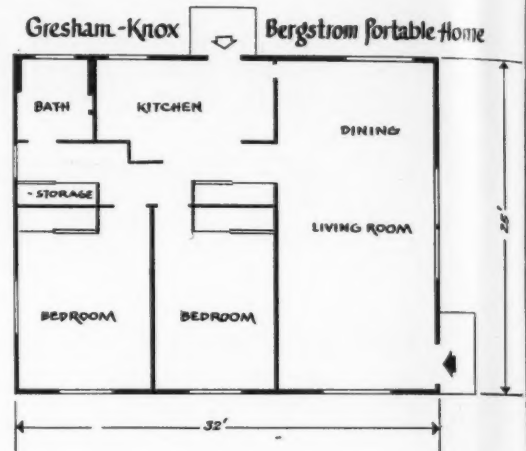
The units being tested in the current program were selected from the submissions of 36 producers who had been invited to supply information about their products. The houses chosen "conformed substantially," HHFA said, to specifications and requirements set up by the Agency.

Prices in the group range from \$7000 to \$8500, relocation cost estimates from \$1.12 to \$2.25 per sq ft, estimated man-hour requirement for relocation from "less than 200" to "355 or less."

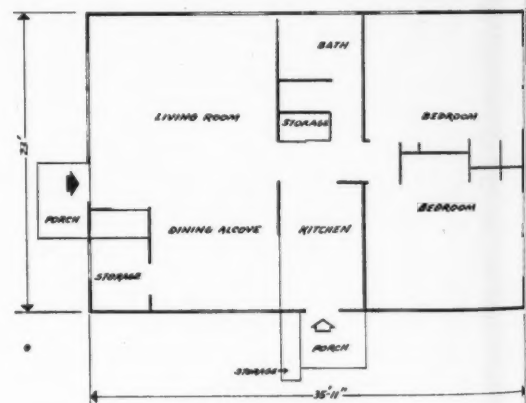
Two of the units being tested are shown on this page. Other producers whose houses were accepted for trial are: Mobilhome Corporation of America, Bakersfield, Cal.; Nicoll Lumber Company, Redwood City, Cal.; Pressed Steel Car Company, Chicago, Ill.; Transa-Housing, Inc., Long Beach, Cal.; and South Bend Fabricating Company, Seattle, Wash.



Portable folding-type house which can be transported as 8 x 24 ft package is offered by Acorn; hinged panels unfold at site from central mechanical core, making two-bedroom unit with more than 800 sq ft. Panels are plastic-impregnated, corrugated paper layers covered with stressed-skin plywood



Gresham-Knox estimates \$7000 cost, 355 man hours for erection, \$2.25 per sq ft for relocation. Erection cost of \$8000 is estimated by Acorn; redeployment 100 miles at \$1.12 per sq ft, under 200 man hours



ACORN HOUSES, INC.

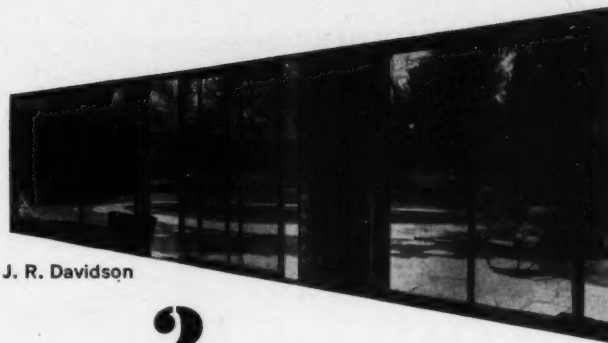


3

Case Study House 1950  
Raphael Soriano, architect

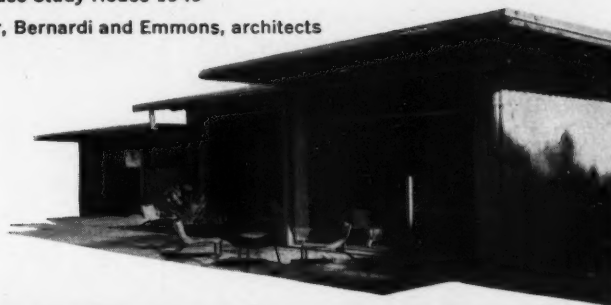
1

Case Study House 1948  
designed by J. R. Davidson



2

Case Study House 1949  
Wurster, Bernardi and Emmons, architects



Case Study House 1952 designed by Craig Ellwood

STEELBILT

4

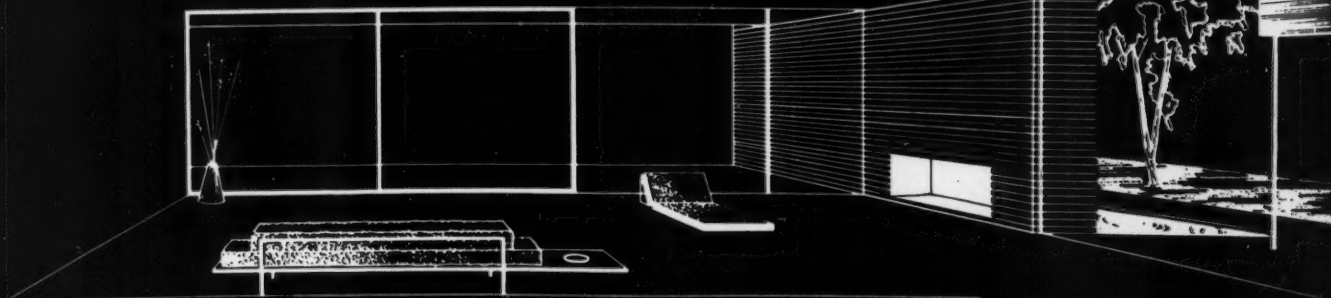
TIME WINNER

ARTS & ARCHITECTURE MERIT SPECIFICATION AWARD

"My specification of Steelbilt sliding glass doorwalls for the 1952 Case Study House is based on extensive experience with their functional and design superiority.

"The advantages of Thermo-glaze for climate and acoustical insulation make it an obvious choice."

Craig Ellwood



*Delineation showing sliding glass units of living room facing city and sea. Dining terrace and view of mountains from Bel-Air is to right of fireplace.*

Craig Ellwood has specified Steelbilt sliding glass doorwalls for three and one half elevations in the 1952 Arts & Architecture Case Study House. He has also chosen Steelbilt's "Thermo-glaze" (dual glazed on the job) as an insulating partition. Thus for the fourth time Steelbilt merit has been recognized and specified for this significant design and construction program.

For 18 years, Steelbilt design and engineering has paced its industry. Mr. Ellwood's choice is another expression of a general recognition of Steelbilt leadership.

If you contemplate using sliding glass doorwalls or windows, single or dual glazed, you should know about the important exclusive advantages Steelbilt offers.

Valuable information as well as installation and full scale cross-sectional details will be gladly sent on request.

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4805 EAST WASHINGTON BOULEVARD

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## SUMNER SPAULDING DIES AT 59; FELLOW OF A.I.A.

SUMNER SPAULDING, 59, a Fellow of the American Institute of Architects and former head of the A.I.A.'s Slum Clearance and Urban Redevelopment Committee, died April 10.

Mr. Spaulding, who was a practicing architect in California for 27 years, had been associated since World War II with the firm of Sumner Spaulding, John Rex, architects, C. C. De Swarte, structural engineer, of Los Angeles.

Mr. Spaulding received a B.A. degree at the Massachusetts Institute of Technology in 1916. He studied in Europe from 1921 to 1926.

Mr. Spaulding's early work was largely residential and his interest in house design continued throughout his career (see pages 115-121, this issue). He had done many college buildings, including the designs for the men's campus at Pomona College.

For the last ten years, Mr. Spaulding devoted much time to the field of slum clearance, urban rehabilitation and community planning. He served as chairman of the committee of the Southern California Chapter of the A.I.A. which from 1937 to 1943 was engaged in designing the Los Angeles Civic Center.

Mr. Spaulding's work included the Los Angeles Municipal Airport, with J. C. Austin, the Santa Catalina Island Casino, the School of Medicine at the College of Medical Evangelists, Los Angeles, and the new State Exposition Building, also at Los Angeles.

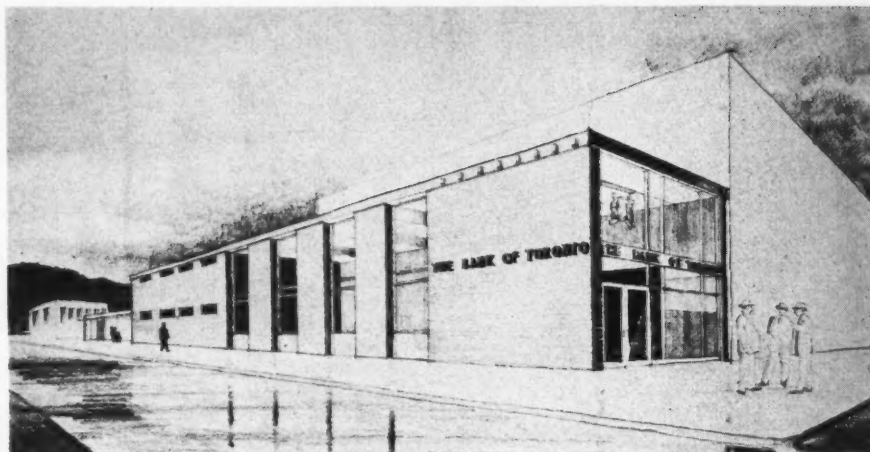
Mr. Spaulding was a past president of Southern California A.I.A. Chapter.

## WOMEN'S GROUP INVITES QUERIES ON NEW UNITS

WOMEN ARCHITECTS and wives of architects throughout the country have been invited to consider the possibility of forming new chapters of the Women's Architectural League as auxiliaries to local chapters of the A.I.A.

W.A.L., which has functioned in the nearly 12 years of its existence in California as an extremely active medium for increasing public awareness of architects and architecture, now has a chapter for each of the nine A.I.A. chapters in California. Its effectiveness and its potentialities were recently recognized in the election of an officer from the membership of the California Council of Architects for liaison with the League.

Information on formation of new chapters of the League in other states can be obtained from Mrs. Bolton White, Route 2, Box 369B, Los Altos, Cal.



Photograph of rendering shows branch building for Bank of Toronto at Orangeville, Ont. The simple contemporary design reflects a growing trend in Canada away from the "fortress-type" bank building. The architects are John B. Parkin Associates

## NEWS FROM CANADA by John Caulfield Smith

### 323 Builders' Loans Approved For Defense Workers' Housing

Latest figures from Central Mortgage & Housing Corp. show builders' loans for 323 houses have been approved under the defense workers' housing scheme.

All are earmarked for employees of the A. V. Roe plant at Malton, Ont. Terms are 10 per cent down for houses financed under the National Housing Act at an approved sales price.

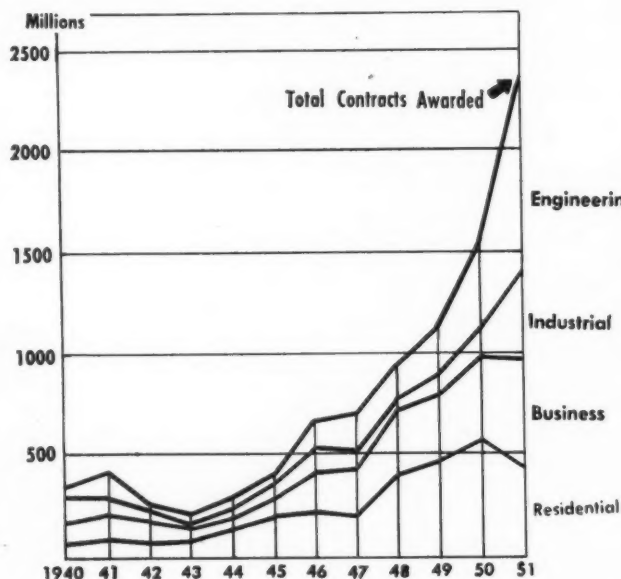
Recent additions to the list of certified defense plants whose staff members

qualify under the scheme are John Bertram & Sons Ltd., Dundas, Ont.; Canadian Pacific Airlines (repairs), Calgary, Alta.; and Canadian Steel Improvements Ltd., Etobicoke, Ont.

In addition, divisions of Canadian Arsenals Ltd., at Quebec City, Valcartier, St. Paul L'Ermite, St. Dominique and Valleyfield in Quebec, and Lindsay, Long Branch and Scarborough in Ontario, have also been certified.

(Continued on page 32)

### CANADIAN CONSTRUCTION 1940-1951

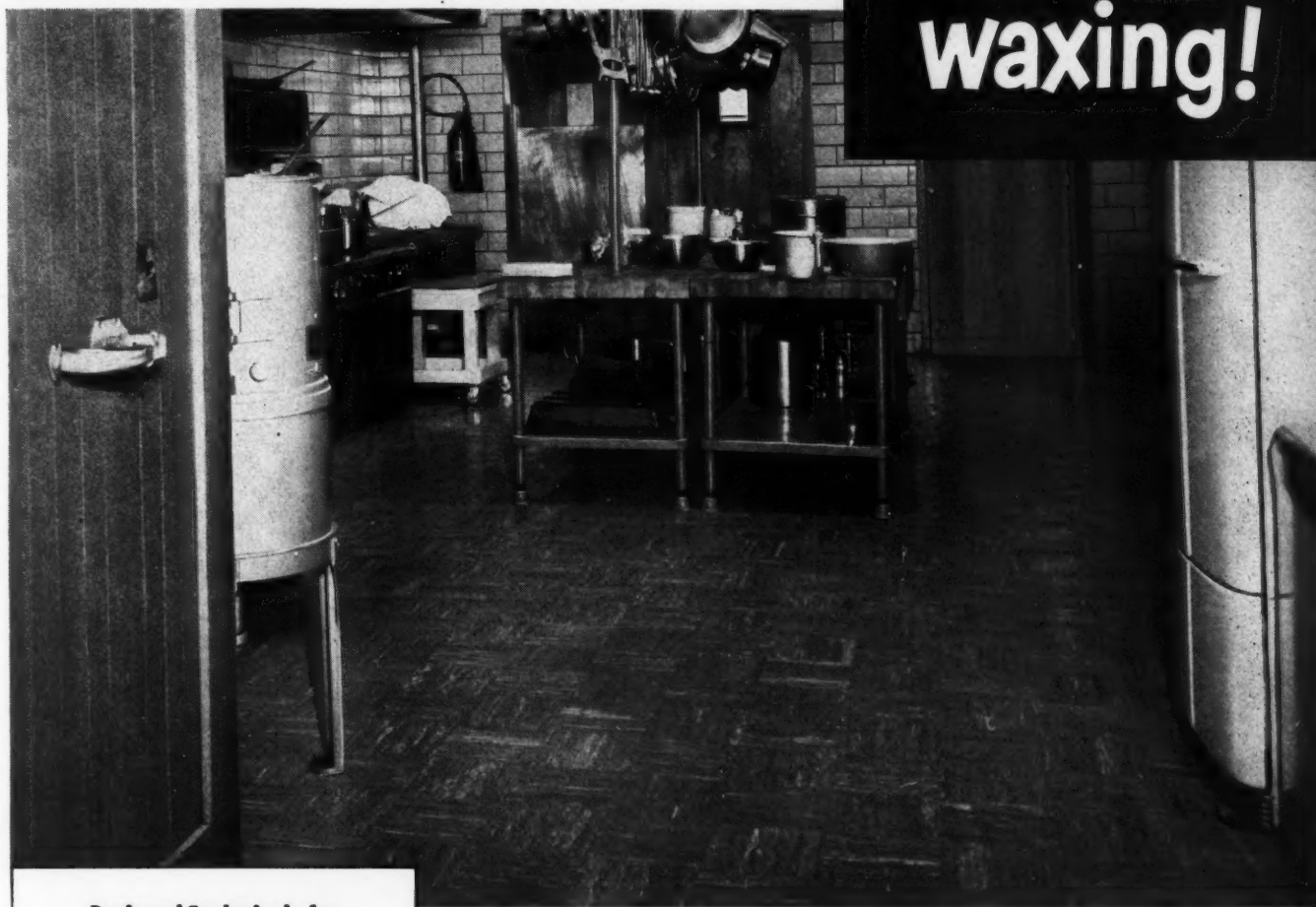


Phenomenal growth of building industry in Canada is well illustrated in graph showing dollar volume of contracts awarded in Canada in the last 12 years. Graph: courtesy "The Financial Post"



*New—the only  
Pre-Polished Flooring!*

**Never  
needs  
waxing!**



**Designed Exclusively for  
Modern Commercial Architecture**

Choose a high-styled flooring designed to compliment modern commercial architecture. For any flooring area your clients will enjoy VINYL-TILE's lifetime beauty, lifetime economy—beauty and economy offered by no other flooring.

**A**CKNOWLEDGED by architects and decorators to be "The World's Most Beautiful Flooring," VINYL-TILE is wonderfully rich and warm and lovely to behold. But VINYL-TILE offers more than beauty—

**FOUR NEW EXTRAS**

VINYL-TILE never needs waxing because

it comes pre-polished to a lifetime luster. Year after year it retains its installed-today look—without waxing. And with just a minimum of ordinary cleaning effort.

VINYL-TILE looks sparkling clean and fresh after years of even severe service because its gorgeous colors are built into the wearing surface—colors that defy fading, won't scrub off or "walk off."

VINYL-TILE is resistant to the actions of greases, fats, oils, mild acids, commercial cleansers, waxes. Thus it is

ideal for practically any type of commercial installation.

VINYL-TILE is easy to install, perfect for showcase jobs, lends itself to "personalized" floors of your own original design.

So when you specify VINYL-TILE, you specify a most remarkable flooring whose beauty, ease of maintenance and economy must win your clients' approval. See VINYL-TILE, in either sheet or tile, at flooring dealers' and contractors' everywhere. For specification data, write to Goodyear, Flooring Department, Akron 16, Ohio.

*"World's Most Beautiful Flooring"* Vinyl-Tile  
BY **GOODYEAR**

Wingfoot—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

**Makers of Wingfoot Rubber Flooring**



*... and for temperature control, I'll insist on Honeywell!*

Looks like the budding architect in Steig's cartoon wants to be sure his "make-believe" building is going to be comfortable! For, as his older architect friends probably advised him, he knows the *surest* way to make any building comfortable is to insist on Honeywell controls.

If you have a control problem, Honeywell can help you solve it. We can provide the proper thermal environment for any client—anywhere—in any kind of structure.

A large staff of well-informed control engineers—in 91 different Honeywell offices across the nation—are experienced in doing just that. Or—there's

a lot of literature that's yours for the asking—on the automatic control of heating, ventilating and air conditioning.

So, why not *talk to Honeywell*? Why not *write to Honeywell* about *your* control problem?

Honeywell controls are available for all buildings—large, small, commercial or residential. See the facing page for interesting facts about some of these fine Honeywell controls.



*For help with any control problem talk to Honeywell*



for offices, stores, restaurants, laboratories

## Specify Honeywell Electronic Air Conditioning Control

*Give your clients the ultimate in comfort—and  
increased efficiency, lower maintenance costs*

**N**ow, with this completely new type of air conditioning control, you can offer clients comfort and operating efficiency never before possible!

You see, this new Honeywell system electronically "feels" temperature changes as they occur and then gives *fast*, accurate modulating control over heating and air conditioning dampers or valves.

And because it is *electronic*, it's 100 times more sensitive than conventional systems! This means faster reaction to changes in load; no temperature "overshoot"; no waste of either warm or cool air.

It *allows new methods of operation* so equipment can be utilized at *peak* efficiency at all times! For example, change-over from heating, ventilating and cooling is accomplished smoothly without "jumps" in the control point. Its *flexibility* allows selection of the most economical sequencing of valves and dampers. And the *simplicity* of Honeywell's electronic thermostat cuts maintenance costs to a bare minimum.

Your selection of this new Honeywell *electronic* air conditioning control is sure to produce greater client satisfaction, once they experience its wonderful comfort and low maintenance costs!

# MINNEAPOLIS Honeywell



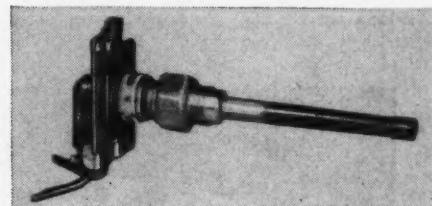
*First in Controls*

*... and for help with the  
temperature control, I'll  
talk to (your firm name)*

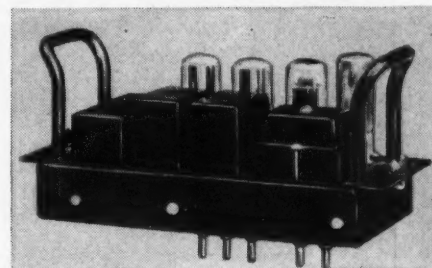
FREE—personalized cartoon. For your 8½" x 9" reproduction of this Steig cartoon (incorporating your name or the name of your firm), fill out and mail coupon today.



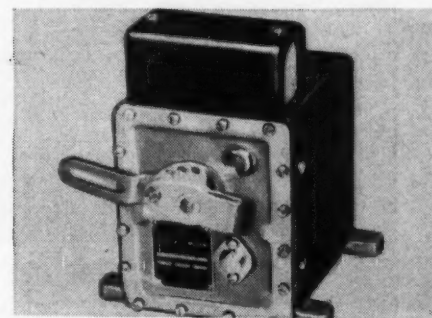
**Room Thermostat.** No moving parts to wear out or get out of adjustment.



**Duct and Immersion Thermostat.** Measures temperatures accurately from -50 degrees to 300 degrees F.



**Electronic Relay.** Here's the famous "brain" that measures thermostat signals, operates the valves and dampers.



**Modulating Motor.** Slightest temperature fluctuation causes motor to change valves or dampers.

MINNEAPOLIS-HONEYWELL REGULATOR CO.

Dept. AR-5-115, Minneapolis 8, Minnesota

Gentlemen:

☐ Please send me your booklet "New Horizons of Comfort with Honeywell Electronic Air Conditioning Control."

☐ Please send me a free personalized reproduction of the Steig cartoon,

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Firm Name \_\_\_\_\_

Address \_\_\_\_\_

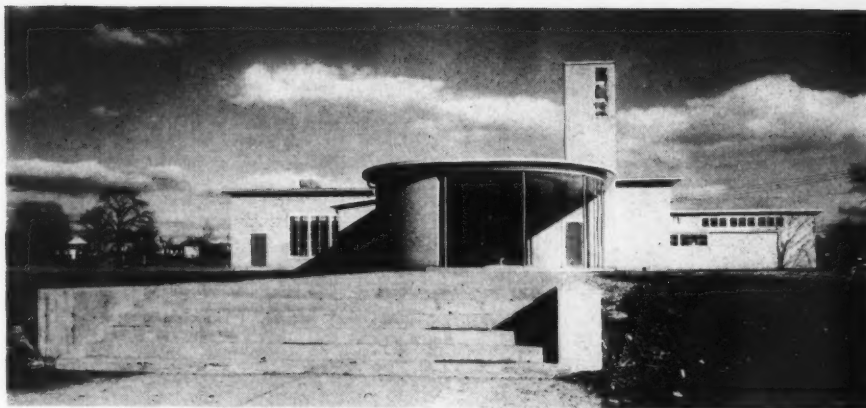
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

## THE RECORD REPORTS

### CANADA

(Continued from page 28)

J. G. Workman Public School, Scarborough, Ont., has covered play area for inclement weather. The architects were Murray Brown and Elton of Toronto



**GLOBE SPRINKLERS**

**FIREMEN EVERY 10 FEET**

**DETECT, STOP FIRE . . . AUTOMATICALLY**  
*FIRE* can't do much damage of any kind if GLOBE Automatic Sprinklers are on guard . . . for they *discover and stop FIRE*. Moreover, GLOBE protection means lower cost for insurance . . . year after year. GLOBE means **SAFETY** plus **SAVINGS**.

**GLOBE AUTOMATIC SPRINKLER CO.**  
NEW YORK . . . CHICAGO . . . PHILADELPHIA  
*Offices in nearly all principal cities*

**THEY PAY FOR THEMSELVES**

### Legion Housing Conference Asks Big Low-Rent Program

Heavy emphasis was laid on subsidies and controls at the housing conference recently sponsored by the Ontario Command of the Canadian Legion in Toronto.

Significance of the conference findings is that they will form the basis of representations to be forwarded by the Legion at its national convention this month to the Federal Government. Experience shows that the powerful veterans' organization is heard with respect at Ottawa. The policies it espouses therefore deserve close scrutiny.

### Housing Need Stressed

The conference opened with agreement that necessity for a large scale housing program at this time dwarfs all other considerations, including those of national defense and inflation. Spiritual, moral, social and human values should, it was said, precede financial and material considerations.

In short term category, immediate action was called for to provide not less than 100,000 new low rental houses in 1952. *They would be 100 per cent publicly financed, with non-interest bearing loans made by the Federal and Provincial Governments amortized over a long period.*

To stimulate home ownership, 90 per cent federal loans bearing 3½ per cent interest (present National Housing Act rate is 5 per cent) were urged. These mortgages would be repaid on a long term basis, and would be available only to persons earning \$4000 or less per year.

### Some Curbs Urged

To make a large-scale house building program possible, the conference would curtail "non-essential and deferrable

(Continued on page 34)



Associated Architects: Mayer & Whittlesey • Skidmore, Owings and Merrill  
 Consulting Engineers: Jaros, Baum & Bolles  
 Heating Contractor: J. L. Murphy, Inc.

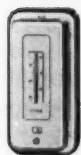
Owned and Managed by  
 NEW YORK LIFE INSURANCE  
 COMPANY



# Manhattan House

—with 582 modern, carefully planned apartments occupies an entire block at 66th and 2nd Ave., New York City. Comfort and fuel savings obtained here, year after year, will yield a handsome return on the investment in **POWERS** control.

Type D Room  
Thermostat



## POWERS<sup>®</sup>

### ZONE TEMPERATURE CONTROL

*In this Outstanding Apartment Building  
 Assures Comfort, Dependability, Lowest Maintenance Cost*

Temperature of hot water supply to convectors in this modern building is controlled by a Powers **MASTROL** System.

**How It Operates**—A Powers Master Thermostat with its sensitive bulb in a special housing for sun-wind effect and outdoor temperature is located on outside wall of zone being controlled. It operates in conjunction with 4 Room Thermostats on the 4th, 9th, 14th and 19th floors of each zone through Averaging Relays to establish the control point for Series 100 Sub-Master Controllers. A manually operated switch on the main control panel is provided to raise or lower the control point when desired.

A program clock automatically reverts the controls to night operation during which period the outdoor Master Thermostat readjusts Series 100 Sub-Master Controller to a lower control point than used during day operation. Other types of Powers controls regulate various fans supplying heating and ventilating to other spaces in the building.

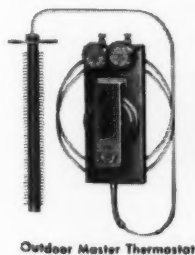
Experience gained by Powers in all types of prominent buildings will be helpful to you. When problems of temperature and humidity arise, contact our nearest office. **THE POWERS REGULATOR COMPANY, Skokie, Ill.**

(a77)

OVER SIXTY YEARS

OF AUTOMATIC TEMPERATURE AND HUMIDITY CONTROL

OFFICES IN OVER 50 CITIES

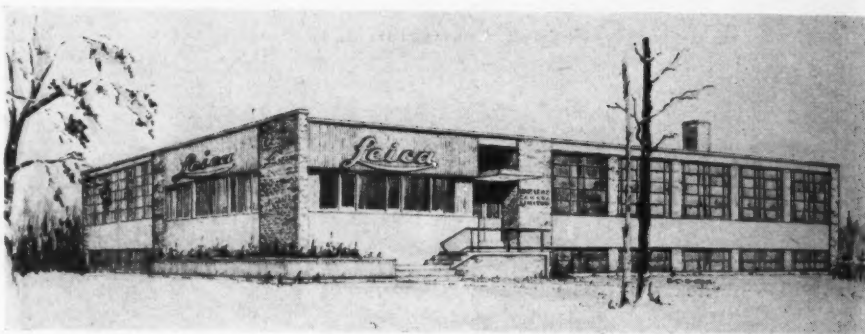


## THE RECORD REPORTS

### CANADA

(Continued from page 32)

Factory building for Ernest Leitz (Canada) Ltd. has been built at Midland, Ont. The architect for the building was E. C. S. Cox of Islington, Ont.



*now you can specify dramatic,*

*tri-dimensional wall covering*

**LINKRUSTA**

ORIGINAL — IMPORTED



**eliminates repapering,  
painting ... forever!**

Not wallpaper, not fabric, Linkrusta is a rugged, plastic-type wall covering with unique tri-dimensional patterns etched in bas-relief.

Thoroughly washable and sunfast too, Linkrusta withstands repeated scrubbing without injury to its textured beauty. So sturdy, so resistant to abuse, it's practically indestructible! Linkrusta is permanent — eliminates repapering and painting forever — lasts the life of the wall itself. Linkrusta actually strengthens walls and prevents plaster cracks.

The play of light across its plastic forms creates dynamic contrasts in highlight and shadow. For hotels, hospitals, restaurants, theaters, smart shops, public buildings and homes. Choose from 21 distinctive styles in muted, in-laid colors or natural for painting ... available in convenient rolls hung like wallpaper.

**FREE!** Get all the details about this wall covering wonder! Write today for Specification Sheet A.

**Wall Trends, inc.**

*Manufacturers of hand printed  
wallpaper and Stylon wall canvas*

Showroom: 509 Madison Avenue  
New York 22, New York

construction," initiate controls to prevent the export of building materials and to allocate materials and stabilize prices. Municipalities would be relieved of the cost of servicing land and providing educational facilities for new housing projects.

Destruction of existing houses for business or traffic improvement schemes should, it was decided, be postponed.

#### **Long-Range Planning Sought**

The conference also urged:

- (1) A national inquiry into building costs to determine what can be cut.
- (2) Establishment of a National Re-development Commission to plan new housing areas and the distribution of industry and power.
- (3) Accelerated research in construction methods and materials.
- (4) Governmental and municipal cooperation in modernizing building codes.
- (5) Planning, in cooperation with organized labor, the expansion of the construction labor force.
- (6) Encouragement of new sources of building supplies, subsidizing them if necessary.

#### **Mortgage Money Stays Tight: How Finance Canada's Housing?**

What can be done to loosen investment purse strings insofar as National Housing Act mortgages are concerned? Would higher interest rates or bigger government guarantees help?

The *Financial Post* comments that these changes would have some effect. But neither would alter the fact that, generally speaking, Canada's lending institutions feel they have quite enough of their money in mortgages. They entered the postwar period with an imbalance in their investment portfolios.

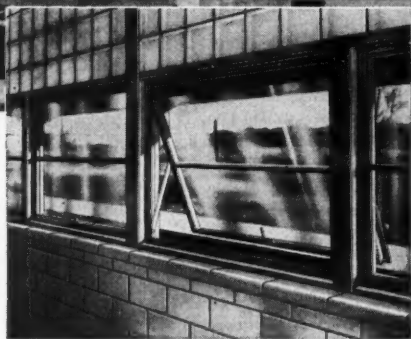
(Continued on page 36)



# Where the *other* services also count—it's always BAYLEY WINDOWS



Fullon School, Springfield, Ohio  
Marley W. Leibly, Archt., Springfield, Ohio  
Geo. Sheaf & Company, Contractor, Columbus, Ohio



## Highlights of this New Exclusive BAYLEY Product

- Carries Quality Approved Seal of the Aluminum Window Mfgs. Ass'n for materials, construction, strength of sections and air infiltration.
- Modern, ribbon-line appearance.
- Maximum air, light and vision.
- Typical Ventilation—



- Other layouts available.
- Sub-frames and imposts integral, incorporate separate window units.
- Installed in prepared openings or built into masonry.
- White bronze and stainless steel hardware.
- Permanent, carefree aluminum construction—Requires no paint.

**73** Years of  
**RELIABILITY**



## New Bayley *AirVUE* Window *Scientifically Designed for Modern Schools*

A fine quality product is only the *first* essential to a truly satisfactory relationship. Better cooperation and extended services through all the building stages—going even beyond full performance demands—is even more important. Known for a policy that's founded on this fact is why Bayley is so regularly preferred by discriminating Building Designers.

The new Bayley AirVUE Window is tangible evidence of this policy. To contribute scientific design improvements in a school window, Bayley did not pursue the conventional. They studied the problem from the building's inception to the student's comfort. They collaborated with school Architects and Educational Authorities.

As a result the Bayley AirVUE Window fulfills today's professional diagnosis of a proper window for modern school buildings. In addition it complements the Bayley Aluminum Projected Window, and also it incorporates construction features made possible only by Bayley's years of specialized window experience.

You too will find *extra values* in discussing your window problems—whatever they may be—with Bayley. Write or phone.

See Bayley in Sweet's. Complete catalogs on Aluminum Windows, 17a/BA; Steel Windows, 17b/BAL; SAF-T-GARD Hospital Detention Window, 17b/BAY.



PROJECTED PIVOTED

AIRVUE

GUARD SAF-T-GARD

**THE WILLIAM BAYLEY COMPANY**

Springfield, Ohio

District Sales Offices:

Springfield, Ohio

Chicago 2

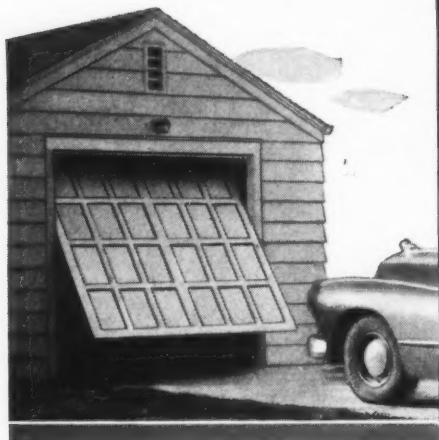
New York 17

Washington 16

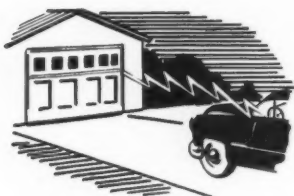
# R-W Garage Door Operators

- **Convenient**
- **Practical**
- **Efficient**

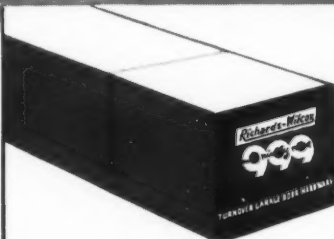
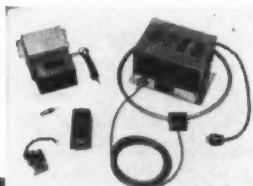
For every need—two R-W controls, designed and engineered for smooth sure performance



**No. 1251  
Standard control**  
—operates from drive-side key-switch



**No. 1504 Radio control**  
—battery operated radio with dash control button opens and closes doors within 75 feet.



**And . . . R-W 999  
Garage Door Hardware**

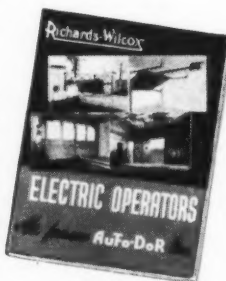
Complete overhead garage door hardware conveniently packed in one box! For single doors up to 200 lbs.; double doors up to 375 lbs. Write for folder giving full details.

## Check these important R-W features!



- ✓ **Easy to install**—Completely assembled, including track, in a single carton at the factory.
- ✓ **Easy to service**—Simple adjustments, requiring no special tools, keep the doors working smoothly.
- ✓ **Safe**—A large friction clutch prevents operational failures with resulting damage to property. In power failure, doors may be operated manually.

For complete information on R-W AuT-o-DoR line see your nearest dealer or write for catalog number A-87



1880 **RICHARDS WILCOX** 1952  
OVER 72 YEARS

**Richards-Wilcox Mfg. Co.**  
A HANGER FOR ANY DOOR THAT SLIDES  
AURORA, ILLINOIS, U. S. A. • Branches in all principal cities

## THE RECORD REPORTS

### CANADA

(Continued from page 34)

Now balance has been restored. As a result, most institutions are content to merely reinvest mortgage principal repayments along with sufficient new income to maintain their present ratio of mortgages to total assets.

This poses another question. Where is the money coming from to finance the large scale housing program necessitated by Canada's economic development?

### Policy Change Unlikely

There are two possibilities: a change in the investment policies of the lending institutions, or the entry of Central Mortgage & Housing Corp. into the direct lending field (the Corporation is already involved on this basis in defense workers' and certain other types of housing). Neither of these possibilities is likely to mature at present.

On one hand, the lending institutions are loath to change their conception of what is a "desirable" proportion of mortgages, arrived at over many years. On the other hand, direct lending by CMHC would create an artificial credit situation which might increase the cost of construction.

(Continued on page 364)



This summer cottage for Georgian Bay, Ont., was planned by the architect, E. C. S. Cox, for himself. It capitalizes on sloping site, uses native materials and large glass areas





more meshes per sheet with *Bostwick*  
**Diamond Mesh Metal Lath**

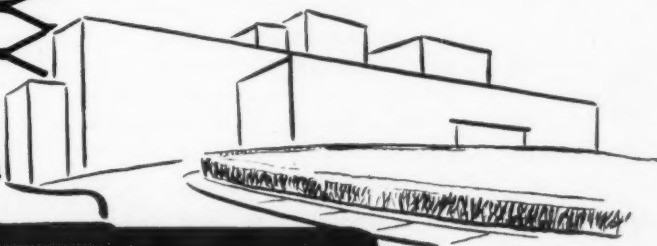


*Bostwick* **METAL LATH**  
**FOR FLEXIBILITY IN DESIGN**

● Georgetown Hospital at Washington, D. C., was designed by Kayser, Neal and Reed, Pittsburgh, Pa. As the job progressed from rough preliminary sketches to finished plans and specifications no adjustments in dimensions were required by limitations of the lath or corner bead.

Metal lath has always met the structural, decorative, and functional designs of every decade. That's why Bostwick metal lath has been used in the finest structures for over a half-century.

Hence, when you are down to details on your next job, why don't you investigate Bostwick metal lath, corner bead, casings and accessories. We'll gladly send you specification data.



**THE**

*Bostwick*

105 HEATON AVE. • NILES, OHIO

**STEEL LATH COMPANY**

### New Methods, New Designs: U. S. Surveys School Plant

THE FIRST PROGRESS REPORTS in the school facilities survey of the Federal Security Agency's Office of Education carries some pointed comments on the need to update designing methods.

It notes that increasing emphasis on health and physical fitness programs calls for all-weather schoolhousing at

elementary and secondary levels.

A site of adequate size is required, furnished with at least certain basic equipment and facilities.

It cites the modern emphasis on the educational process of "learning by doing," which implies necessity for larger spaces so that boys and girls have room to try things themselves rather than sit passively by to hear or read.

### Community Uses Noted

From the report:

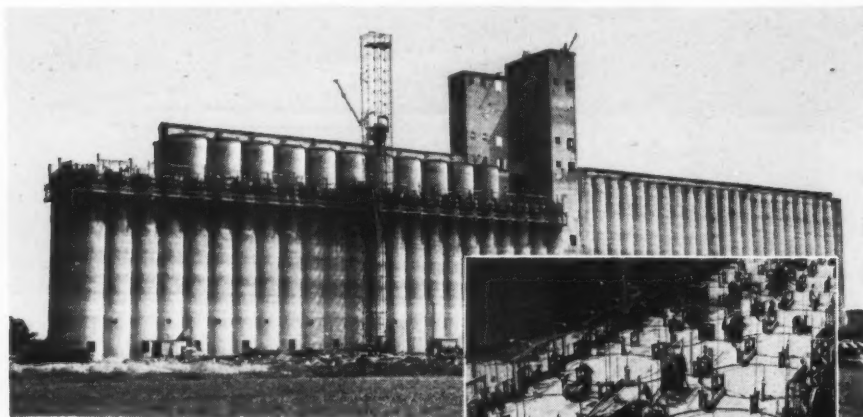
"Modern school plants must be designed to provide for numerous community uses. Activities which often must be incorporated into schoolhousing plans include adequate space for community and educational meetings; shops in which farm machinery can be repaired by the farmer himself; community libraries; community canning; evening classes of various kinds; youth organizations; and facilities for community physical education and recreation, both indoor and out.

"The demands for educational change and improvement made upon the schools are such that many schoolhouses have rapidly become as obsolete as a one-mule plow. In many of them it is impossible to have a modern educational program at all, and they are of a design and in such condition that it is no longer economically feasible to remodel or rehabilitate them. Their replacement is essential."

This report includes data from 25 states, covering phases of present plant inventory, discussing age, adequacy, size, fire resistance, water services, etc.

Subsequent parts of the survey will take up state by state requirements in greater detail as the Office of Education completes the work on inventory and swings over to the analysis of need. Eventual aim is establishment of a 10-year goal for adequately modernizing the American school plant.

(Continued on page 318)



337' x 48' slip-form deck used to pour addition to Farm Bureau grain terminal at Canal Winchester, Ohio. Once a minute, 192 screw jacks were turned to raise entire forms 15/100". Carts, served from central hopper, distributed concrete to the continuously rising forms.

## How to pour a 1,200,000 bushel basket — in one piece

By a continuous pour of 6,000 cu. yds. of ready-mixed concrete, into slip-forms raised on jackrods at the rate of .15" every minute, this elevator addition was completed in 168½ hours. The 24 bins, each 20' in diameter and 127' high, and interstitial walls, covering a 337' x 48' area, form one monolithic structure without joint or seam.

Because concrete design envisions a homogeneous material, of numerous elements completely mixed, the ready-mixed concrete industry certifies by Rating Plate those truck mixers and agitators which have the proper design, capacity, drum speed, mixing action and water control necessary to produce a homogeneous concrete of uniform strength.



### Look for this Badge of Dependability on Truck Mixers:

You have a right to insist on this Rating Plate on any truck mixer that serves your jobs. It is available to all who comply with the quality standards established by the National Ready Mixed Concrete Association and the Truck Mixer Manufacturers Bureau.

### These member manufacturers comply with Bureau standards:

BLAW-KNOX DIVISION  
Pittsburgh, Pa.  
CHAIN BELT COMPANY  
Milwaukee, Wis.

CONCRETE TRANSPORT MIXER CO.  
St. Louis, Mo.  
THE JAEGER MACHINE COMPANY  
Columbus, Ohio

THE T. L. SMITH COMPANY  
Milwaukee, Wis.  
WORTHINGTON PUMP & MACHINERY CORP.  
Dunellen, N.J.



John H. Martin, new deputy administrator, Construction & Resources expansion, DPA





# GPX ... *food for thought*

GPX, the plywood and plastic sandwich that inspires new forms of architectural expression, offers you food for thought.

Tough, smooth, rugged . . . interesting in color and texture . . . lightweight, yet strong . . . GPX provides cost-cutting solutions to many problems.

Natural Grade GPX offers the warmth of wood beauty, plus extreme resistance to abrasion, acids, molds, fungi, heat and water. GPX Paint Grade . . . White for *interior* use . . . Brown for *exterior* use . . . presents a superior paint surface, with no checking, little or no grain-raise and requires no undercoat.

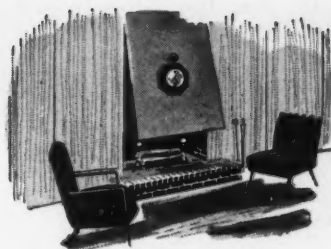
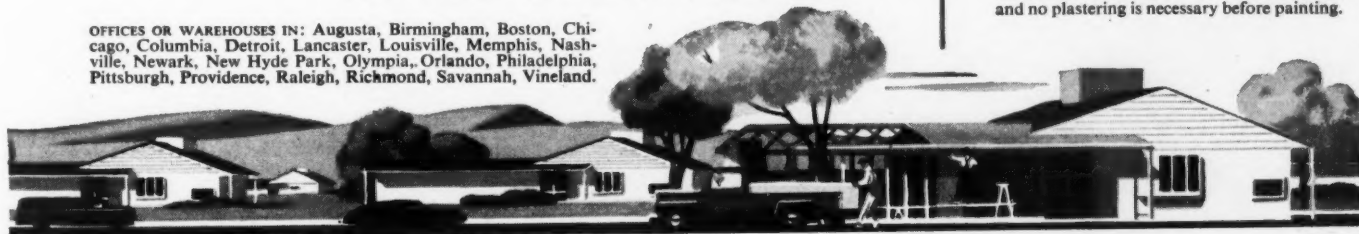
GPX plays a leading role in such diverse uses as repetitive concrete forms, exterior house siding, boat decks and bulkheads, built-in cabinets, display fixtures, outdoor furniture, and hundreds of other industrial and construction uses. You'll like its versatility, durability and economy, too. Ask your dealer about GPX, or send for descriptive GPX folder and product sample.



**GEORGIA—PACIFIC  
PLYWOOD COMPANY**

608-5 North Capitol Way, Olympia, Wash.

OFFICES OR WAREHOUSES IN: Augusta, Birmingham, Boston, Chicago, Columbia, Detroit, Lancaster, Louisville, Memphis, Nashville, Newark, New Hyde Park, Olympia, Orlando, Philadelphia, Pittsburgh, Providence, Raleigh, Richmond, Savannah, Vineland.



## GPX NATURAL GRADE

Beautiful, satin-smooth panels of GPX are ideal for dramatic natural wood wall paneling. Use it for sliding doors, built-in cabinets, flush panel cupboard doors, wainscoting garage doors and siding—wherever a permanently finished wood surface is specified.



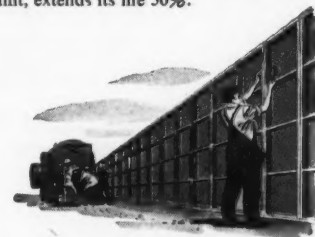
## GPX WHITE PAINT GRADE (INTERIOR)

Manufacturers of kitchen cabinets and cupboards have saved as much as 5¢ a foot and cut labor time in half with GPX White Paint-Grade. GPX's prefinished surface eliminates sanding and priming—one coat of enamel usually covers! Use GPX for all painted surfaces such as shelves, table tops, closets, laundry and workroom cabinets.



## GPX BROWN PAINT GRADE (EXTERIOR)

GPX Brown Paint Grade for exterior uses fits today's trend toward ranch style homes. It can be sawed into wide widths and applied as lapped siding, or the lightweight, easy-to-install panels can be used with horizontal or vertical battens to vary architectural treatment. Laboratory tests indicated that GPX's smooth, hard surface covers evenly with less paint, extends its life 50%.



## GPX CONCRETE FORM GRADE

Users of GPX for concrete forms obtain up to 50 repeated uses of one side of a GPX panel, with similar results from the other side! And GPX doesn't stop cutting costs there: ceilings poured into GPX forms set so smoothly that costly hand finishing is virtually eliminated, and no plastering is necessary before painting.

Now ...



**THE MODERN III**  
Three panels lend themselves  
to striking color treatments.

**THE MODERN II**  
Two contrasting panels  
add interest to the unity  
of this design.



W ... a custom-styled panel door in tune  
with modern design.

## The G-P Decorator Door

Georgia-Pacific's *Decorator Door* offers a new design concept in which the door plays a new, important part.

G-P Decorator Doors blend with modern design ... add style and dramatic accents to traditional homes, stores or offices. They lend themselves beautifully to dramatic color effects. You can specify G-P Decorator Doors for *exterior* entrances or *interior* use. There are three basic designs in a complete range of sizes and grades.

Give your clients the extra style and beauty of G-P Decorator Doors at a *new low price*. Georgia-Pacific's quality control makes possible a door that is custom-styled in appearance and quality yet available at a price far lower than custom-door prices.

### **Beauty and Quality at a New LOW COST**

Be sure to see the G-P Decorator Doors yourself before you start your next job. If your lumber dealer doesn't stock them yet, write for our new Decorator Door folder. Georgia-Pacific Plywood Company, 617-5C North Capitol Way, Olympia, Washington.

#### **TESTED AND PROVEN**

The United States Testing Company subjected G-P doors to a series of exacting tests. After 500,000 hard slams (equal to 137 years of normal use) there was virtually no sign of wear.

Available in either  
raised or flush molding



**THE MODERN I**  
The single panel creates  
an effect of height in  
traditional and modern settings.



## **GEORGIA—PACIFIC**

### **PLYWOOD COMPANY**

OFFICES OR WAREHOUSES IN: Augusta, Birmingham, Boston, Chicago, Columbia, Detroit, Lancaster, Louisville, Memphis, Nashville, Newark, New Hyde Park, Olympia, Orlando, Philadelphia, Pittsburgh, Providence, Raleigh, Richmond, Savannah, Vineland.

DOUGLAS FIR PLYWOOD • HARDWOOD PLYWOOD • GPX  
SOUTHERN & WESTERN LUMBER • DOORS

## CONSTRUCTION COST INDEXES

## Labor and Materials

United States average 1926-1929 = 100

Presented by Clyde Shute, manager, Statistical and Research Division,  
F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assocs., Inc.

## NEW YORK

Period	Residential		Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Concr. Brick and Steel		Residential		Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Concr. Brick and Steel				
	Brick	Frame		Brick	Steel	Brick	Frame		Brick and Concr.	Brick and Steel			
1925	121.5	122.8	111.4	113.3	110.3	86.4	85.0	88.6	92.5	83.4			
1930	127.0	126.7	124.1	128.0	123.6	82.1	80.9	84.5	86.1	83.6			
1935	93.8	91.3	104.7	108.5	105.5	72.3	67.9	84.0	87.1	85.1			
1939	123.5	122.4	130.7	133.4	130.1	86.3	83.1	95.1	97.4	94.7			
1940	126.3	125.1	132.2	135.1	131.4	91.0	89.0	96.9	98.5	97.5			
1946	181.8	182.4	177.2	179.0	174.8	148.1	149.2	136.8	136.4	135.1			
1947	219.3	222.0	207.6	207.5	203.8	180.4	184.0	158.1	157.1	158.0			
1948	250.1	251.6	239.4	242.2	235.6	199.2	202.5	178.8	178.8	178.8			
1949	243.7	240.8	242.8	246.4	240.0	189.3	189.9	180.6	180.8	177.5			
1950	256.2	254.5	249.5	251.5	248.0	194.3	196.2	185.4	183.7	185.0			
1951	273.2	271.3	263.7	265.2	262.2	212.8	214.6	204.2	202.8	205.0			
Dec. 1951	274.4	272.5	264.9	266.6	263.8	216.1	219.0	207.9	205.0	208.9			
Jan. 1952	278.5	275.3	270.3	274.2	270.0	217.5	219.8	210.1	208.1	211.5			
Feb. 1952	278.3	275.1	270.1	274.1	270.4	217.8	220.1	210.5	207.7	211.1			
Feb. 1952	125.3	124.8	% increase over 1939			106.7	105.5	107.8	152.4	164.9	121.3	113.2	122.9

## ATLANTA

## ST. LOUIS

1925	118.6	118.4	116.3	118.1	114.4	91.0	86.5	99.5	102.1	98.0
1930	108.9	108.3	112.4	115.3	111.3	90.8	86.8	100.4	104.9	100.4
1935	95.1	90.1	104.1	108.3	105.4	89.5	84.5	96.4	103.7	99.7
1939	110.2	107.0	118.7	119.8	119.0	105.6	99.3	117.4	121.9	116.5
1940	112.6	110.1	119.3	120.3	119.4	106.4	101.2	116.3	120.1	115.5
1946	167.1	167.4	159.1	161.1	158.1	159.7	157.5	157.9	159.3	160.0
1947	202.4	203.8	183.9	184.2	184.0	193.1	191.6	183.7	186.8	186.9
1948	227.9	231.2	207.7	210.0	208.1	218.9	216.6	208.3	214.7	211.1
1949	221.4	220.7	212.8	215.7	213.6	213.0	207.1	214.0	219.8	216.1
1950	232.8	230.7	221.9	225.3	222.8	227.0	223.1	222.4	224.5	222.6
1951	252.0	248.3	238.5	240.9	239.0	245.2	240.4	239.6	243.1	243.1
Dec. 1951	255.4	252.0	241.8	244.3	242.0	246.9	241.3	242.4	245.3	245.5
Jan. 1952	256.1	252.9	241.9	244.4	242.2	248.0	242.7	242.6	245.4	245.8
Feb. 1952	255.9	252.7	241.6	244.2	242.0	247.6	242.3	242.1	245.0	245.4
Feb. 1952	132.2	136.2	% increase over 1939			% increase over 1939				
			104.7	103.8	103.4	134.5	144.0	106.2	101.0	110.6

## SAN FRANCISCO

The index numbers shown are for combined material and labor costs. The indexes for each separate type of construction relate to the United States average for 1926-29 for that particular type — considered 100.

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.:

index for city A = 110  
index for city B = 95  
(both indexes must be for the same type of construction).  
Then: costs in A are approximately 16 per cent higher than in B.

$$\frac{110-95}{95} = 0.158$$

Conversely: costs in B are approximately 14 per cent lower than in A.

$$\frac{110-95}{110} = 0.136$$

Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926-29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

These index numbers will appear regularly on this page.



another **HOMASOTE FIRST**—designed to reduce the cost of building

## SHEATHING and SHINGLING *in ONE Operation*

### with the revolutionary Nova Insulated Sidewalls and Roofs

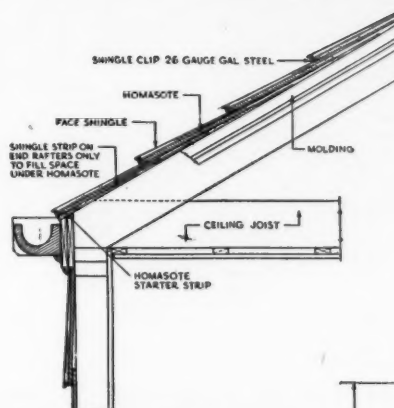
Wide exposures—up to 12" on roofs and 14" on sidewalls—with  $\frac{3}{4}$ " shadow lines—have long been accepted as the highest standard in architectural design and exterior beauty.

Now you can give your client these big advantages—plus complete sheathing—together with major savings in materials, time and labor.

Three fully tested products make possible this revolutionary new method of shingling and sheathing at one and the same time... First, the patented Nova Shingling Clip. Second, a panel of *weatherproof* insulating-building board. Third, a shingle of the finest cedar. Installation time: more than  $\frac{1}{3}$  less. Two men can sheathe and shingle the sidewalls of the average small home in one day!

Obviously, the details of a system as revolutionary as this, cannot be covered on a single page. Let us send you a fully illustrated folder with complete construction details. The coupon below will save your time.

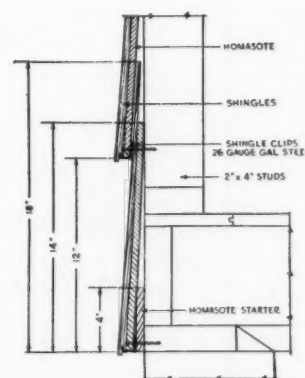
### Another group of NOVASCO PRODUCTS



**NOTE:** The window pictured above is the wholly new Nova-Vita Insulated Sliding Window—the Thermopane window with reinforced Neoprene frame and Fiberglas track—that has its own screen and requires no storm sash. For details address Department NV.

#### By this method . . .

- 14" EXPOSURES FOR SIDEWALLS
- 12" EXPOSURES FOR ROOFS
- DEEP SHADOW LINES
- NO NAILS IN SHINGLES
- MAJOR SAVINGS IN MATERIALS, TIME AND LABOR



IN PREPARATION: THE NOVA SYSTEM FOR ASBESTOS SHINGLES

**NOVA SALES**  
*Co.* TRENTON 3, N. J.



A wholly-owned subsidiary of Homasote Company—manufacturers of the oldest and strongest insulating-building board; wood-textured and striated panels.

**NOVA SALES CO., Trenton 3, N. J., Dept. 73A**  
Send full details on Nova Insulated Sidewalls and Roofs.

NAME.....

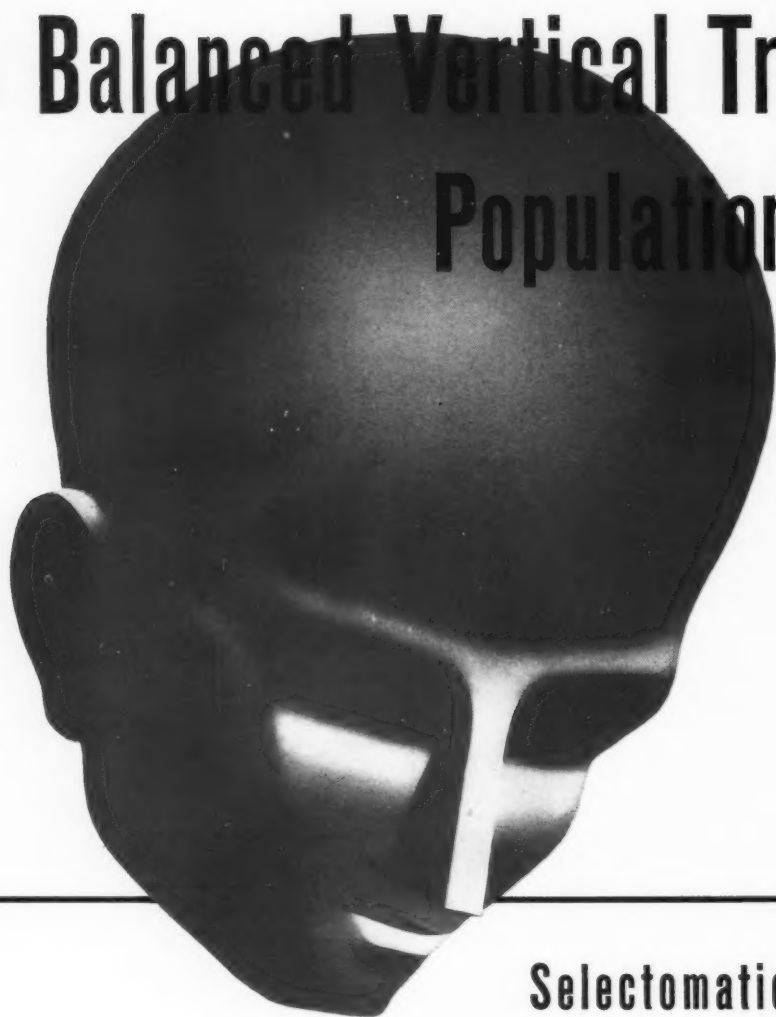
ADDRESS.....

CITY & ZONE.....STATE.....

My lumber dealer is .....

*Another Westinghouse First...*

# A Balanced Vertical Transportation System Population of 10,000...



*Now — Selectomatic  
Elevators without  
operators combine with  
Electric Stairways to  
set new standards  
in economical, efficient  
vertical transportation*

## Selectomatic Without Operators

- Automatic elevators, those which run without attendants, have for years proven successful in apartment house and hospital installations.
- Now the advantages of automatic elevator operation are available with a Westinghouse Selectomatic System. Selectomatic is the amazing elevator control that matches calls, cars and floors . . . reduces waiting time to a minimum . . . increases passenger handling capacity . . . provides fast, accurate landings with Synchro-Glide Landing Control.
- Operating costs are reduced, since no attendants are needed to run the cars.
- Tenants learn quickly to operate Selectomatic elevators without operators. Their use in single occupancy buildings is proving both popular and efficient.

TUNE IN ON HISTORY! Only Westinghouse brings you complete coverage of four-month political campaign over CBS television and radio.



# System that Handles a Building **AUTOMATICALLY**



## *The General Accounting Office Bldg., Washington, D. C.*

**Facts About The Building**—This huge 7-floor building has a population of 10,000 with a basement and sub-basement parking area for 800 automobiles. It has about 1,000,000 sq. ft. of floor space and a third-floor cafeteria — the largest one room dining area in the world.

**The Problem**—What would be the most efficient, most economical system of vertical transportation to handle this building's tenants?

**The Solution**—Westinghouse installed a balanced combination of 12 *Selectomatic* elevators to run without operators and 16 Electric Stairways.

**The Results**—This balanced Westinghouse transportation system gives General Accounting Office *all* these benefits and savings:

1. \$800,000 investment saving over an all-elevator system (40 elevators would have been required).
2. \$200,000 annual saving in operating costs—this system utilizes only 2 starters as opposed to 60 attendants for an all-elevator system requiring operators. Also, Stairways cost less to operate than do elevators.
3. 30,000 square feet additional usable floor space made available by the in-

stallation of this balanced system over an all-elevator system.

4. *Maximum availability*—Electric Stairways provide no-wait, ready-to-step-on service.

You, too, can benefit by the Westinghouse principle that the vertical movement of people in a building should be treated as an "overall problem." For years Westinghouse has developed and tested the products that bring this principle to life. Send for Folder SA6446 for more facts about Westinghouse Balanced Vertical Transportation. Westinghouse Electric Corp., Elevator Division, Dept. D-1, Jersey City, N. J.

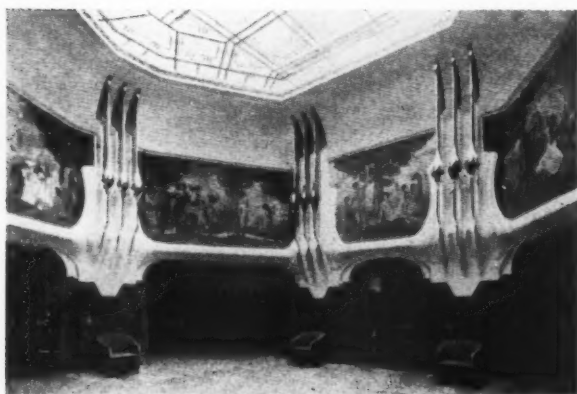
YOU CAN BE SURE...IF IT'S

# Westinghouse

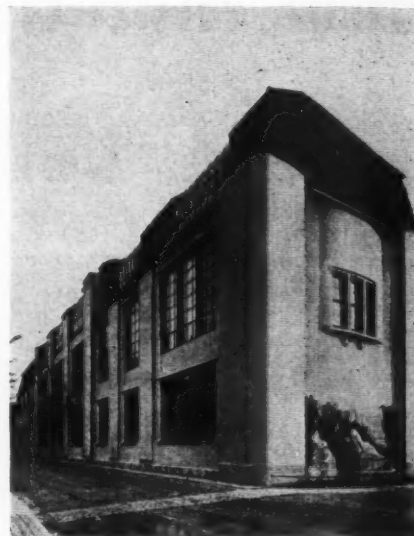
J-98641

## REQUIRED READING

Below: Central Hall at the Dresden Exposition of 1906 marked the culmination of decorative line in Van de Velde's style



Right: School of Applied Arts at Weimar, also designed by Van de Velde, was completed in 1905



### THE ART NOUVEAU

*The Art Nouveau.* By H. F. Lenning. Published by Martinus Nijhoff (The Hague, Netherlands), 1951. 8 by 10 3/4 in. 143 pp., illus. \$5.50.

REVIEWED BY ROBERT A. MCKELVEY\*

Mr. Lenning's book comes along at a time when the origin, history, architectural and cultural significance of the Art Nouveau movement have been nearly forgotten. The term "Art Nouveau," when used now to describe modern sculpture and architecture, has come to imply derision. Those who have no more than a passing acquaintance with the significance of the movement often misuse the term to belittle any design that is curiously individual and that cannot be explained in terms of the logic of its color, texture, structure and form.

As a study of Mr. Lenning's bibliography will indicate, there has been very little written in book form about this incipient stage in the development of modern design principles. With the exception of profusely and indiscriminately illustrated books showing interior decor and furniture executed in Paris in the prevailing Art Nouveau fashion, the balance of the information must be sought out in magazines and periodicals

on art, decoration and architecture which were contemporary to the era when the style flourished.

The author believes that the value of the movement lay in its theories and principles and not in the flippant and flamboyant exhibitionism of its designers. The essential flaw in the style, he thinks, was the fact that the "artist" would not submit to discipline and over-emphasized the spontaneous sensuous reaction evoked by "line" alone. He feels further that because it was over-cerebral it was likely to degenerate rapidly once out of the hands of Van de Velde.

To this reviewer the real importance of the movement is the fact that it produced a concentration on the lineal aspects of form and hence on an analysis of structure. As a result interior planning was more imaginatively conceived to permit a freer flow of space. It also resulted in an occasional effort to make a conscious adaptation of plan to site and function. Out of it developed an appreciation of the use of iron and its alloys; steel columns no longer had to be disguised. Finally, it helped to make the public amenable to such functional innovations as built-in furniture and boldly defined wall areas.

Mr. Lenning concludes with his belief that it was Van de Velde and his fol-

lowers that erected the indispensable bridge between 19th century eclecticism and the International Style of the 20th century. It might also be added that they forecast the experiments now being made in developing lightweight network and crystallographic structures.

The author's attempt to be all-embracing in his discussion of the derivation of the movement, although admirable, is at times labored, and his conclusions in this connection become diffuse. It might have been advantageous if he had discussed in a total way the relationship of the curvilinearism of the Art Nouveau movement to the growing consciousness of the fact that the straight line was a formalism devised by man to measure distance and magnitude, and that such lines were not natural to the true quality of organic life being discovered by the scientist.

These, however, are minor shortcomings. This is an excellent book. It provides important background material for that particular part of the history of modern art and architecture about which not much is generally known. The fact that it is the first book published in English treating the Art Nouveau style in a broad and comprehensive way makes it an important contribution to a better understanding of the history of modern architecture.

\* Mr. McKelvey is a designer and former fellowship student at Taliesin West.

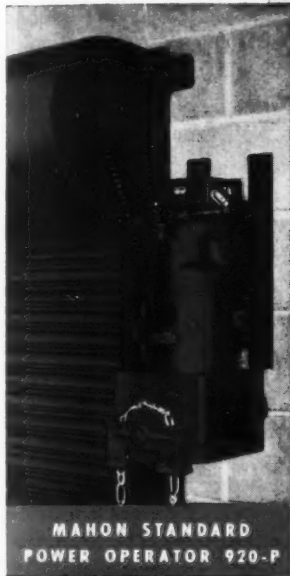
(Reviews continued on page 48)



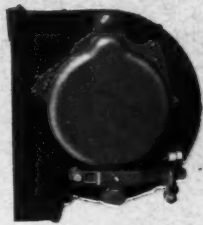
# Rolling Steel DOORS

## *Manually, Mechanically, or Power Operated*

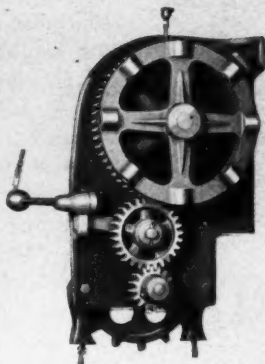
In warehouses and other buildings with high ceiling clearance where maximum usable floor area is the prime consideration, Rolling Steel Doors occupy a minimum of space . . . their vertical roll-up action occupies no usable space inside or outside the opening, or above the lintel level. No other type of door offers such space economy. In the particular installation below, Mahon Underwriters' Labeled, Automatic Closing Rolling Steel Doors were employed in openings in a dividing wall between an inclosed loading dock and the warehouse proper. In case of fire, any doors in the open position will close automatically. Rolling Steel Doors are permanent—their all-metal construction assures you maximum protection and a lifetime of trouble-free service. Whether you buy standard doors or Underwriters' Labeled type for fire protection, you will find that you get a greater dollar value in Mahon Rolling Steel Doors . . . a study of Mahon Specifications covering materials, application of protective coating, operating mechanisms, and other extra-value items, will convince you. See Sweet's Files for complete information—including Specifications, or write for Catalog No. G-52.



MAHON STANDARD  
POWER OPERATOR 920-P



Mahon Release Device and Governor on the Automatic Closing Mechanism of a Mahon Rolling Steel Fire Door. Fusible links release the mechanism in case of fire and the door closes automatically.

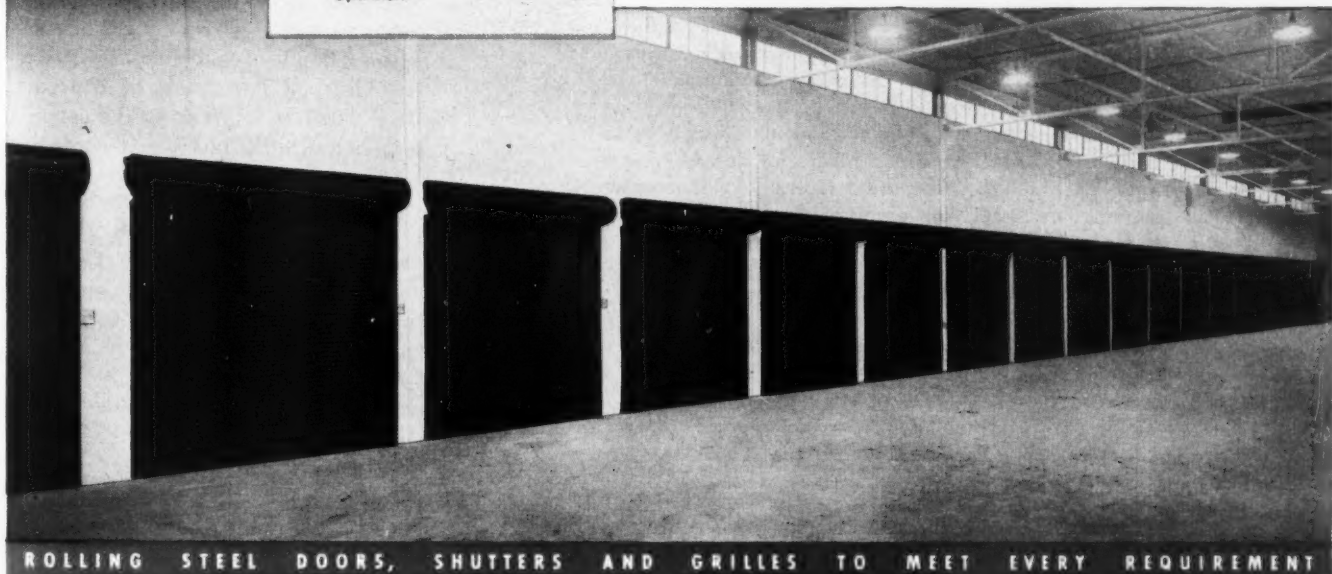


Mahon Release Device for Chain-Gear Operator on Mahon Mechanically Operated Rolling Steel Fire Doors. Fusing of the Fusible Link, which releases the Automatic Closing Mechanism, simultaneously disengages the Chain-Gear Operator.

## THE R. C. MAHON COMPANY

Detroit 34, Michigan • Chicago 4, Illinois • Representatives in all Principal Cities

Manufacturers of Rolling Steel Doors, Grilles, and Automatic Closing Underwriters' Labeled Rolling Steel Doors and Fire Shutters; Insulated Metal Walls and Wall Panels; Steel Deck for Roofs, Partitions, and Permanent Concrete Floor Forms.



ROLLING STEEL DOORS, SHUTTERS AND GRILLES TO MEET EVERY REQUIREMENT

Twenty-Four Mahon Automatic Underwriters' Labeled Doors installed in a new Warehouse for Food Warehouse, Inc., Detroit, Mich. Two Mahon Power Operated Rolling Steel Doors 17'-0" x 22'-0" are installed in railroad openings in this same building. Louis G. Redstone, Architect, Campbell Construction Company, General Contractors.

# MAHON

**THERE'S  
GOOD  
PROFIT**



## IN FINISHING ATTICS OR BASEMENT ROOMS

### FIND AND CONVERT WASTE AREAS

Have you overlooked profitable business in altering homes to new needs? Lots of people can't afford new homes yet. But old home remodeling can and is being afforded, through added rooms or waste space conversion. This continued demand should be cashed to the limit. Specify Fir-Tex for these saved-space jobs. It builds as it insulates as it finishes — all at one cost, the cost of insulation alone.

### ATTIC OR BASEMENT ROOMS

Nine out of ten basements can be altered to rumpus, play or sometimes sleeping rooms. Attics offer possibilities for sleeping, spare or study rooms. With Fir-Tex, because it seals out cold, seals in warmth, and shushes sound, you can provide comfort quickly. Because of Fir-Tex finish, rooms are attractive, too.

### BETTER PLASTER BASE

Lath by Fir-Tex provides an ideal base for plaster and completely seals the room likewise. Fir-Tex eliminates lath marks — plaster cracking is reduced to a minimum. To Fir-Tex lath, plaster sticks like glue.

### EXTERIOR SHEATHING

Fir-Tex sheathing seals any building from heat or cold, dust, wind or noise. Being asphalt impregnated, Fir-Tex sheds weather. It increases bracing strength when used on pitched roofs, exterior side walls.

**FIR-TEX**  
INSULATING BOARDS

DANT & RUSSELL, Inc.,  
Exclusive Sales Distributors  
Equitable Building,  
Portland, Oregon

## REQUIRED READING

(Reviews continued from page 46)

### COLLECTOR'S ITEM

*American Furniture: Queen Anne and Chippendale Periods.* By Joseph Downs. The Macmillan Company (60 5th Ave., New York, N. Y.), 1952. 9 by 12 in. Introduction, 400 illustrations + Index. \$17.50.

REVIEWED BY ANN RUGGLES \*

At Winterthur, in the gentle country beyond Wilmington, Delaware, Henry Francis du Pont has assembled the most extensive collection of furniture and furnishings made in America during the 17th and 18th centuries. The furniture and interiors mark the transition from the hand-hewed heaviness of the first colonists' oak and pine to the elegant refinement of American cabinetmakers' 19th century adaptations of Sheraton and Hepplewhite.

Now, Joseph Downs, curator of the Winterthur Museum, has culled from this vast store more than 400 examples of Queen Anne and Chippendale furniture to make up a remarkable pictorial catalog. While technically this is a catalog, it is in reality a research book on the manners, customs and social history of the colonies in the 18th century. In a twenty-six page introduction to the book, Mr. Downs describes the effect of thriving trade on both architecture and furniture design from New England to Charleston. He discusses regional characteristics of cabinet work and the interesting variations within a region or even within a family of cabinetmakers like the Goddards or Townsends of Newport, R. I. Mention is given to the colonial terminology of furniture as recorded in account books and inventories.

"It is a perennial cause for admiration and wonder," says Mr. Downs, "that, in the confines of the small colonial towns and cities, the contributions in the limited realm of furniture should be so great; no other period of time in our history has matched the accomplishment in the decorative arts of the second and third quarters of the 18th century." The books on design by such Englishmen as Chippendale, Ince, Thomas Johnson and Robert Manwaring were, according to Mr. Downs, as useful to American cabinetmakers as were the books on architecture by Robert Morris, Isaac Ware, Langley,

(Reviews continued on page 376)

\* Miss Ruggles is Home Furnishings Editor of the New York World Telegram and Sun.



*Designed* for appearance, performance  
and a lifetime of trouble-free  
*operation.*

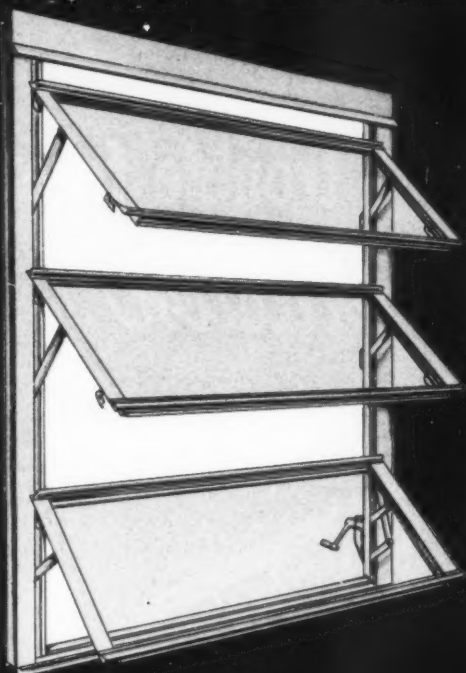
The beautiful, modern  
Drayton Arms Apartments,  
Savannah, Georgia  
Architects: Cletus W. and  
W. P. Bergen, A.I.A.,  
Savannah, Georgia



**Auto-lok**  
AUTOMATIC LOCKING  
*Aluminum*  
**WINDOWS**

COMBINE THE BEST FEATURES OF ALL WINDOW TYPES

*Tightest closing window ever made!*



**Auto-Lok**  
AUTOMATIC LOCKING

*Aluminum*  
**WINDOWS**

**SPECIFIED FOR THE *BIG* JOBS  
BY LEADING ARCHITECTS...**

because AUTO-LOK is the first and only window made that successfully meets all window requirements without a single compromise! AUTO-LOK Windows are designed and manufactured to specifically answer the demands of architects for windows that lend themselves to greater flexibility in the planning stage... save time and costs in installation... give a lifetime of trouble-free service!

**LOW FIRST COST...  
LOWER MAINTENANCE**

Their first cost compares favorably with competing products offering fewer advantages. They are time-proven... you can't buy a better window at any price! AUTO-LOK's simplified operation eliminates wearing parts... no periodic adjustments are ever necessary... gives you a window guaranteed to keep maintenance costs at a minimum.

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Sales Offices in all Principal Cities

**THE  
FIRST  
WINDOW  
TO  
MAKE**

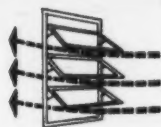
*Weather*  
**TO ORDER**



**FRESH AIR WHILE IT'S  
RAINING...** no more  
running to close win-  
dows. Rain can't enter  
through slanting sash!



**WARMER IN WINTER**  
...because it seals itself  
like a refrigerator...  
keeps heat in, cold out!



**COOLER IN SUMMER**  
...because it opens  
widest...scoops air in  
and up...luxurious ven-  
tilation, but no drafts!

### **Performance Factors Of Aluminum Awning-Type Windows**

Every day, more and more architects and contractors are turning toward aluminum awning-type windows. These newer, more modern windows are being specified for all types of construction, including factories, commercial buildings, apartments, hotels, schools, hospitals and homes. Over a period of years, the aluminum awning-type window has been subjected to rigid and exhaustive tests to determine its performance characteristics and operating efficiency under every known weather condition. This research has been carried on by the leading manufacturers in cooperation with leading architects.

#### **The "Open" Window**

One important advantage in favor of the aluminum awning-type window is that it can remain "open" to provide ventilation and fresh air circulation even when it is raining. Slanting sash is the answer. One aluminum awning-type window, the Ludman Auto-Lok, goes a step farther in this respect. The bottom sash of the Auto-Lok window is designed to remain slightly open, while the upper sash are closed tight and automatically locked. This feature allows for night ventilation and limited ventilation during inclement weather.

#### **Better Ventilation... Easier To Clean**

Because of their outward projection, the vents in aluminum awning windows provide maximum possibility of attaining 100% ventilation. While not all awning windows can be opened to nearly 90 degrees (almost straight out) the degree of their opening can be predetermined by checking the manufacturer's specifications. In their wide-open position awning-type windows can be cleaned from the inside. This very important maintenance factor cannot be underestimated. However, the basic design of the window must be checked. For, on certain of these types, where vents are pivoted on a fixed point, the top vent cannot be cleaned from the inside. The Ludman Auto-Lok window can be cleaned *completely*... all from the inside, top sash, too. This feature is accomplished by Ludman's uniquely designed operating hardware, in which the hinge points of the top sash float down with the mechanism when the window is opened to provide a convenient 6" opening between the top sash and the window frame.

#### **Air Infiltration**

Paradoxically, the use of aluminum awning windows has for many years been retarded because of their generally unsatisfactory performance on the score of tight closure and elimination of air infiltration. Yet, today, the tightest closing window ever made is an awning-type window. This unit is Auto-

**LUDMAN LEADS THE WORLD IN WINDOW ENGINEERING**



Lok, developed by Ludman Corporation after many years of research. Its tight closing performance is made possible by its patented hardware, a self-locking device which automatically seals the window tight when closed. Auto-Lok hardware provides a closure *ten times tighter* than the popular established standards for casement windows and projected sash. Pittsburgh Testing Laboratory tests reveal that air infiltration through a standard, assembly line Auto-Lok window amounts to only 0.095 cubic feet per minute...a degree of weather-tightness heretofore thought impossible in any window. Though the Auto-Lok locking action is exclusive with Ludman, other manufacturers are beginning to use a vinyl plastic weatherstripping material similar to that which Ludman uses to weatherstrip the Auto-Lok unit.

### Simple Operation

The "one-hand" operation of aluminum awning-type windows is another feature that is very well accepted...and, in many instances, one of the important deciding factors in the selection of these windows. For example, this feature is important to hospitals, where busy nurses with a tray in one hand can still open or close the windows with their free hand...saving time and trouble.

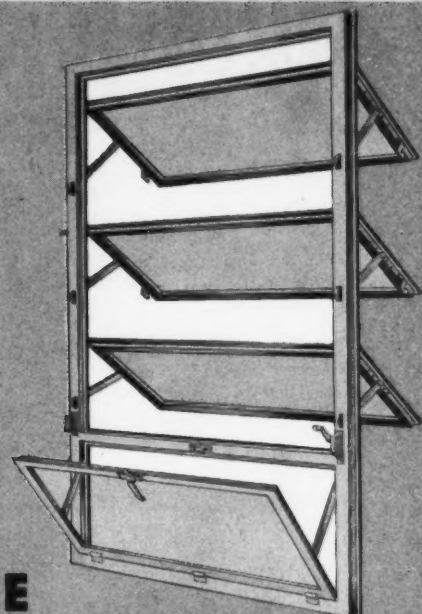
Each individual manufacturer utilizes a distinct type of operator to actuate the window operating hardware. Usually they have large gear boxes to generate the great amount of force required to actuate the torque bar window mechanism. Because of their size they extend over the face of the window sill into the room. Some have removable cranks and extension drives. A study of the operating hardware of all aluminum awning-type windows reveals the fact that Ludman, maker of the Auto-Lok Window, has the most efficient mechanism from the standpoint of easy operation and trouble-free service. The automatic, self-locking principle of the patented Auto-Lok operating device eliminates torque strain required to force the hinges in order to pull individual sash in tight against the frame. In fact, the Auto-Lok mechanism is so perfectly balanced and requires so little pressure that a child can operate the windows.

### The Ideal Window For Any Installation... In Any Climate

The aluminum awning-type window is practical from every standpoint. Installations all over the world, in all climatic extremes, have proven their practicability. Their attractive horizontal lines make them entirely adaptable to all types of architectural design from cottage to skyscraper. Their rapidly growing acceptance is having a marked influence on architectural designs because their clean horizontal lines fit admirably into modern architectural styles.

*Seals itself shut like a refrigerator*

## THE FIRST WINDOW TO *Answer* EVERY PERFORMANCE REQUIREMENT



Read this check list for opening sash...

- ✓ **AMOUNT AND QUALITY OF VENTILATION?** AUTO-LOK checks: 100% ventilation, draft-free! Vents open almost 90°, entering air is scooped in and up.
- ✓ **POSSIBILITY OF VENTILATION CONTROL?** AUTO-LOK checks: You make your own weather! Perfect control in all positions from a slight crack of one vent to full opening of all vents.
- ✓ **IS THE WINDOW EASILY OPERATED?** AUTO-LOK checks: Friction-free, precision balanced "no wear" operation. Fingertip control! with roto-type operator...no interference with screens, drapes or blinds. AUTO-LOK windows never stick.
- ✓ **WEATHER PROTECTION WHEN WINDOW IS OPEN?** AUTO-LOK checks: Awning-type design provides the luxury of healthful, refreshing ventilation even when it's raining.
- ✓ **WEATHER-TIGHTNESS WHEN WINDOW IS CLOSED?** AUTO-LOK checks: AUTO-LOK is the *tightest closing window ever made!* Closes many times tighter than any other window. Patented self-locking device plus elastomeric vinyl weatherstripping automatically seals window tight and isolates weather to a degree heretofore believed impossible.
- ✓ **WHAT OBSTRUCTIONS TO VIEW (RAILS AND MUNTINS)?** AUTO-LOK checks: Extremely narrow yet extra strong rails and muntins are made possible through the use of adeptly engineered extruded aluminum sections.
- ✓ **FIRST COST?** AUTO-LOK checks: Initial cost compares favorably with competing products providing many less advantages. You cannot buy better window performance at any price.
- ✓ **MAINTENANCE COSTS?** AUTO-LOK checks: Simplified operation eliminates wearing parts. No periodic adjustments necessary. Ludman engineering leadership combines the best in design, materials and workmanship to produce a window that will give no-wear operational ease with a minimum of maintenance.
- ✓ **CAN ALL WINDOW GLASS BE CLEANED FROM INSIDE?** AUTO-LOK checks: Window can be completely, comfortably and easily cleaned *entirely* from inside, including top vent, too. No gadgets to disengage.
- ✓ **HOW DOES THE WINDOW FIT IN WITH PLANS FOR SCREENS, STORM SASH, BLINDS, ETC.?** AUTO-LOK checks: Interchangeable *inside* screens and storm sash can be placed or removed easily...just flip the clips, no tools required.

**Auto-lok**  
AUTOMATIC LOCKING  
*Aluminum*  
**WINDOWS**

**LUDMAN**  
*Corporation*

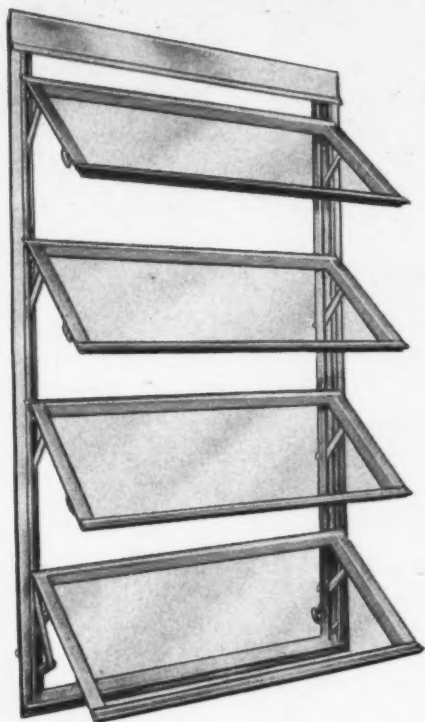
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SALES OFFICES IN ALL PRINCIPAL CITIES

LUDMAN LEADS THE WORLD IN WINDOW ENGINEERING

# Auto-Lok

AUTOMATIC LOCKING  
PATENTED

## THE WINDOW THAT SETS A NEW STANDARD FOR WINDOW PERFORMANCE



**WIDE RANGE OF STOCK SIZES AND ARCHITECTURAL TYPES TO FIT EVERY REQUIREMENT...**



The design of AUTO-LOK Aluminum Windows and the development of their patented, self-locking operating device, are the results of years of research by men who know windows and window problems. The materials that go into the manufacture of AUTO-LOK are the finest produced. The exacting workmanship is your final guarantee of windows that will meet the broadest specifications...with many features to spare!

*Only Auto-Lok gives you*

AUTOMATIC LOCKING  
PATENTED

### ALL THESE FEATURES...

#### FRESH AIR WHILE IT'S RAINING



No more running to close windows...rain can't enter through slanting sash!

#### WARMER IN WINTER...



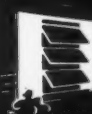
Seals itself shut like the door of your refrigerator...keeps heat in...cold out!

#### COOLER IN SUMMER...



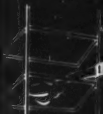
Opens widest...scoops air inward and upward...luxurious ventilation, but no drafts!

#### PRACTICAL BEAUTY...



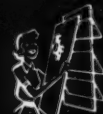
Narrow horizontal lines and graceful tilt of sash in every open position add distinction to any home...lend themselves to a wider variety of architectural arrangements.

#### EASIEST TO CLEAN...



Nothing to lift out...no sash to remove...no gadgets to disengage. Simply open wide and clean all glass from the inside...top sash, too!

#### INTERCHANGEABLE SCREENS AND STORM SASH...



Can be handled all from the inside. Just flip the clips...no tools required. Reduce a day's work to an hour!

#### FRESH AIR NITE-VENT...



Bottom sash opens slightly for night ventilation, while upper sash remain securely locked...fresh air circulation during bad weather, too!

#### FINGER-TIP CONTROL...



for a lifetime. Perfectly balanced, friction-free mechanism operates window at the touch of a finger. No adjustments ever necessary...never sticks, never rattles!

#### CONCEALED HARDWARE...



No unsafe, unsightly mechanism exposed to collect dust. Compact roto-type operator handle does not interfere with drapes, blinds, etc.

*mail this COUPON today!*

**LUDMAN Corporation, Box 4541, Dept. 1 B, Miami, Florida**

Please send me complete information regarding:

- ☐ Auto-Lok Aluminum Windows      I am a . . . Architect ☐  
☐ Auto-Lok Wood Windows      Builder ☐  
☐ Windo Title Jalousies      Dealer ☐  
☐ Ludman Jalousie Doors      ☐ Other \_\_\_\_\_

Also, send your free booklet, "What Is Important In A Window."

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

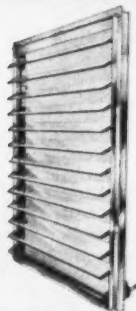
CITY \_\_\_\_\_ STATE \_\_\_\_\_

**LUDMAN LEADS THE WORLD IN WINDOW ENGINEERING**

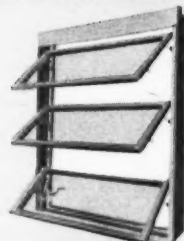
*other* **LUDMAN** *products*



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KNOX COLLEGE MEMORIAL  
GYMNASIUM, Galesburg, Ill.  
Architects: Skidmore, Owings  
& Merrill, Chicago



**5,948 Extra Square  
Feet Of Usable  
Floor Space With**

# \*MEDART

## TELESCOPIC\* GYM SEATS

Take a close look at the pictures above. At the top, all the Medart Seats are in open position ready to comfortably and safely accommodate a packed-to-the-rafters audience of 3,200! The inset shows side seats closed, and seats at one end still open.

These two pictures explain why this gym, with seating capacity for 3,200 persons, requires a building virtually no larger than one without seats for spectators! Imagine what the size of this building would be, and the startling extra cost, if 3200 expensive fixed seats had been installed!

Here is an example proving how Medart Telescopic Gym Seats actually regain the use of 5,948 square feet of extra floor space for daily class activity—evidence of the tremendous savings in building costs made possible by better utilization of space.

Convenience and Ease-of-handling are important factors too. Because of Medart's exclusive "Floating Motion" design, it takes little effort and only a few moments to completely open or close Medart Seats. If all the seats are not needed, only one row, or as many rows as required, can be provided and remaining rows left closed.

Safety is assured, even under loads of 400 Lbs. per lineal foot. Medart's steel understructure is a complete free-standing assembly. Solid, one-piece wood seats, risers and footboards add extra strength and are not used to tie together the steel understructure members. Each row of seats is supported from the floor by four vertical steel members.

Many Other Exclusive Features make Medart Telescopic Gym Seats a "best buy". If you have a seating problem, write Medart.

\*Medart Telescopic Gym Seats are fully protected by U. S. Patents

Send for The **NEW** Medart Catalog



**FRED MEDART PRODUCTS, INC.**

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*World's Only Complete Single Source For Gymnasium Equipment*

Telescopic  
Gym Seats

Lockers & Wire  
Basket Shelving

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& Grade-Robes

Basketball  
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Physical Fitness  
Apparatus

Basketball & Football  
Scoreboards

Physical Therapy  
Equipment



# *In a City of Beautiful Buildings*

## **Celotex Roof Insulation is proving itself where it counts most: ON THE JOB!**



**I**n roof insulation, as in everything else, *the payoff is in performance!* And no other roof insulation can challenge the *job-proved* record for quality, durability and economy set by Celotex Roof Insulation through over 25 years of actual use in all types of installations, all over the country.

Celotex Roof Insulation is low in initial cost, easy to handle, exceptionally durable. It speeds application, reduces labor costs, helps assure a superior, long-lasting roof that requires less maintenance.

So why take risks with untried materials? For complete satisfaction, always specify Celotex Roof Insulation. There's a type to meet every job requirement. Write now for complete technical data! The Celotex Corporation, Dept. AR-52, Chicago 3, Illinois.

*It pays to specify genuine*  
**CELOTEX**  
REG. U. S. PAT. OFF.

**ROOF INSULATION**

The Celotex Corporation  
 Chicago 3, Illinois



### **KASS BUILDING, WASHINGTON, D. C. specified Celotex Roof Insulation**

*Architect: James F. Hogan*

*Roofing Contractor: Easterday-Duckworth Company  
 Owner and Builder: Kass Realty Company, Inc.*

Only the finest of materials were specified for the ultra-modern Kass Building — one of the newest office buildings in the nation's capital. Among these, naturally, was Celotex Roof Insulation.

### **Celotex PRESEAL Roof Insulation**

- Has 0.33 Btu conductance ("c") for nominal 1" thick material.
- Both sides, all edges asphalt coated for complete moisture protection in storage and on the job.
- Controlled application of asphalt at mill protects insulation value by preventing further penetration during mopping.
- Smooth, asphalt-coated surface insures positive bond to both roof deck and roofing felt.
- Comes in a range of thicknesses to meet specific insulation requirements of each job.

**OTHER TYPES** of Celotex Roof Insulation—Preseal "30" and Regular—also available. Write for details.

**1. High Insulating Efficiency** means greater comfort the year 'round, plus reduced heating and air conditioning costs.

**2. Low in Cost** all three ways: initial, applied, maintenance.

**3. Quick, Thrifty to Apply:** installed with less time, work and cost because it's light and easy to handle. Strong and rigid—doesn't have to be "babied" on the job.

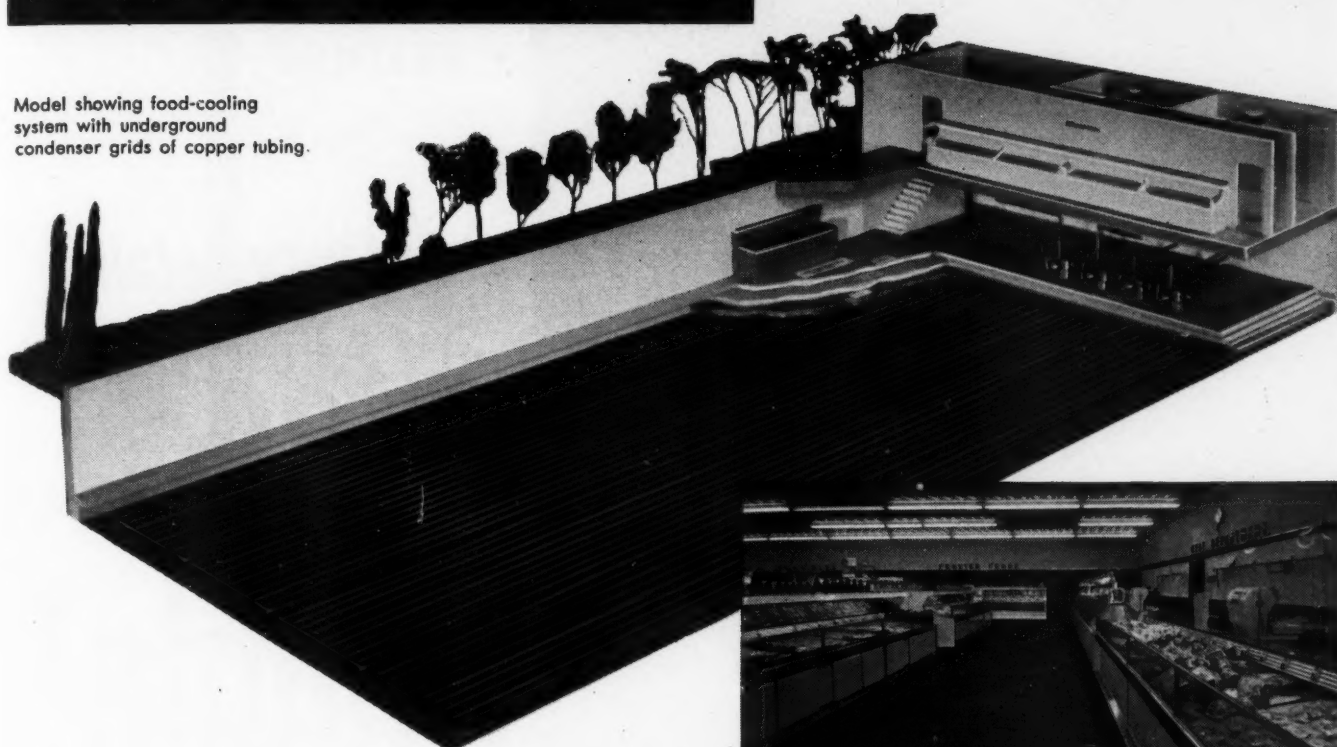
**4. Provides Excellent Bond** for hot mopped roofing felts of either the asphalt or coal tar pitch type.

**5. Durable, Long-Lasting.** It is the *only* roof insulation made of long, remarkably strong Louisiana cane fibres—and protected by the exclusive patented Ferox® Process from dry rot and termite attack.



## FACTS ABOUT COPPER'S ECONOMY

Model showing food-cooling system with underground condenser grids of copper tubing.



**copper tubes**

**form underground**

**refrigeration condenser**

Heat from these display cases is disposed of through tubing buried below basement floor.



Installing condenser grid in wet clay prior to pouring basement floor.



When discussing the refrigeration system of a planned new supermarket, the owner stipulated:

- 1—Low operating costs
- 2—Minimum use of city water
- 3—Dry basement storage facilities

The Charlton brothers of the Temperature Equipment Company, Hartford, met all 3 requirements very successfully and to the owner's complete satisfaction.

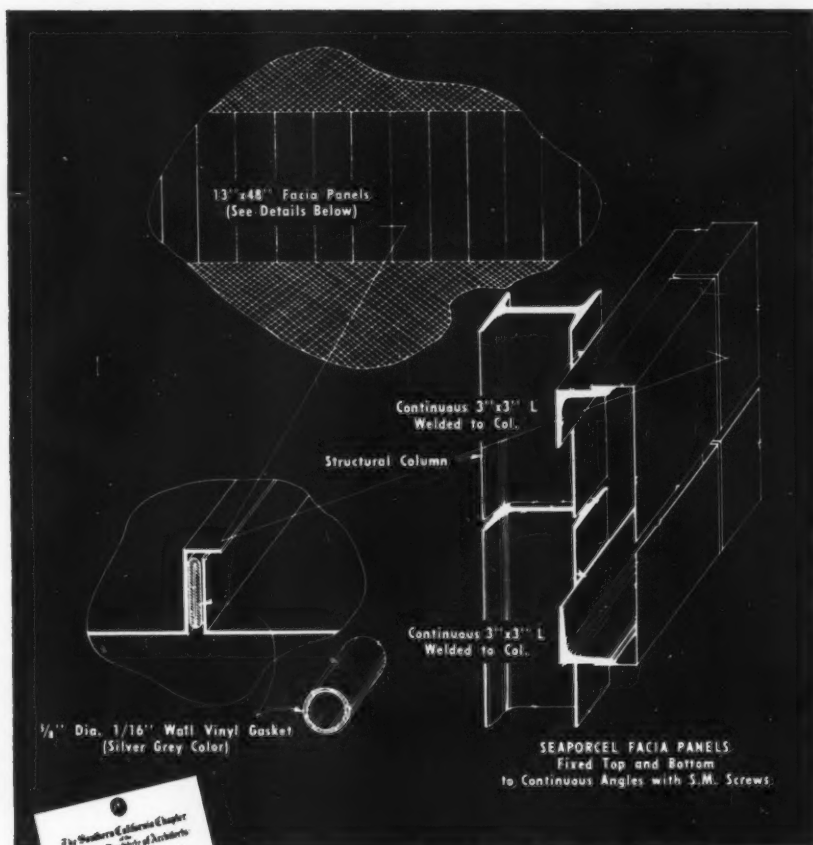
The system was devised so that earth instead of water is used as the cooling medium. Copper tube grids, installed in the ground before the concrete basement floor was poured, serve as the condenser. The surrounding damp earth efficiently absorbs the

heat and enough warmth reaches the basement floor to prevent the accumulation of moisture on its surface.

In the first year of operation the owner estimates a saving of \$750 in water charges alone, plus the added savings afforded by the dry basement in eliminating moisture damage to stored goods. It's another example of the versatility of ANACONDA Copper Tubes for all types of plumbing, heating and refrigeration piping.

A complete description of this installation will be gladly forwarded on request. The American Brass Company, Waterbury 20, Connecticut. In Canada: Anaconda American Brass Ltd., New Toronto, Ont.

**modern plumbing calls for ANACONDA® copper tubes**



*In Every Detail...*

# SO Simple!

*It won honors from the American Institute of Architects!*

See for yourself how simple the architectural and engineering details of a building can be . . . when you specify **SEAPORCEL PORCELAIN ENAMEL** . . . the facing material used on this striking Multi-Deck Building, which building won a Certificate of Honor Award from the American Institute of Architects! Note also what The Magazine of Building reports: "So many engineers, architects and civic officials dropped by to see the new ideas . . . that Vice-Pres. Austrian found himself spending full-time as a guide . . ."

**SEAPORCEL ARCHITECTURAL PORCELAIN ENAMEL** is so simple to use because it's custom-fabricated to specifications—in all contours, forms and sizes—including "shaped" parts from stock dies. Remember also that Seaporcel renders the fullest scope of textures and colors.

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*Multi-Deck Building, Beverly Hills, California, designed by Pereira & Luckman, Architects of Los Angeles; General Contractors: Multi-Deck Corp., L.A.  
Seaporcel Porcelain Enamel in terra cotta cream, semit-matte.*

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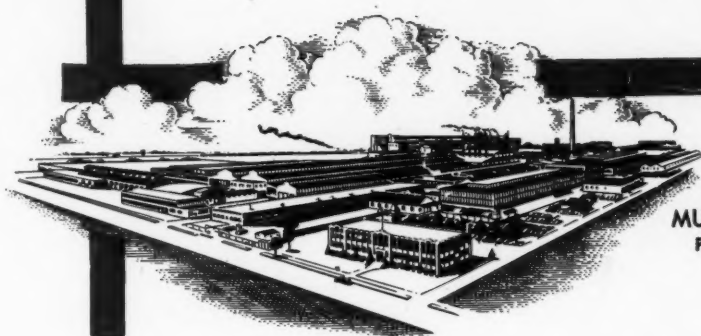


**AND**

**VALLEY METAL PRODUCTS CO.**

**VAMPCO**

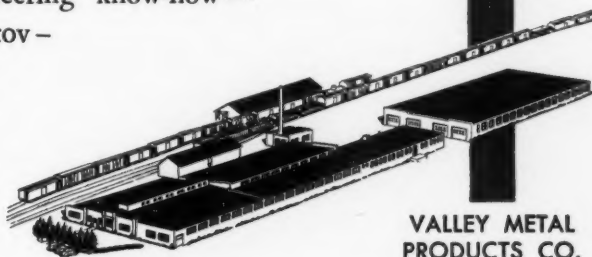
## **HAVE JOINED FORCES TO SERVE YOU BETTER!**



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When two well known names in the building trade consolidate under the same management, it means many extra benefits to you. The Mueller Brass Co., originator and sole manufacturer of **STREAMLINE** copper tube and solder-type fittings for plumbing and heating, and Valley Metal Products Co., manufacturer of **VAMPCO** life-time aluminum windows, have recently joined forces for this reason.

By combining our extensive engineering "know-how"—our production facilities, our sales coverage and capital, we are now in a position to do a bigger and better job for you. Write today for complete details of the products and services available.



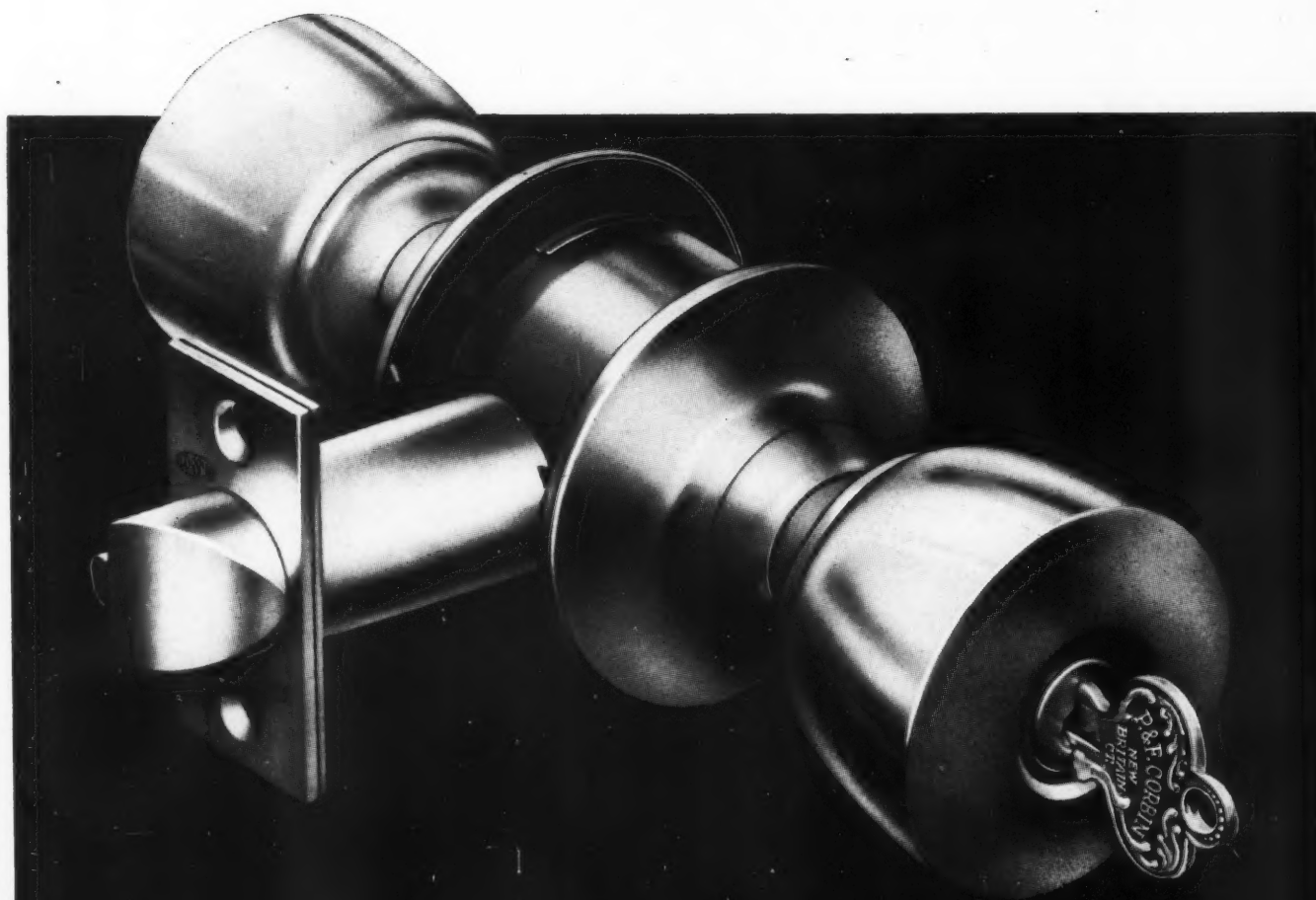
**VALLEY METAL  
PRODUCTS CO.  
PLAINWELL, MICHIGAN**

**VALLEY METAL PRODUCTS CO. PLAINWELL, MICHIGAN**

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**You provide 3 extra-quality features  
when you specify**



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P. & F. CORBIN Division  
The American Hardware Corporation  
New Britain, Connecticut, U.S.A.





## HEAVY-DUTY CYLINDRICAL LOCKS!

- **5/8 inch throw** insures secure locking even on doors that shrink or warp!
- **for extensive master-key systems** the Corbin master-ring cylinder doubles the number of possible key changes!
- **if keys are lost,** the cylinder can be removed readily, from inside, for fast, easy replacement or for re-keying.

Every fine building deserves these extra-quality features provided by Corbin Cylindrical Locks. Compare these locks point by point, feature by feature, with any other cylindrical locks you have ever used. You will find that Corbin offers all the standard features *plus* extra quality advantages that mean more satisfactory operation — longer wear with less maintenance — fast, low-cost installation.

Corbin Cylindrical Locks are furnished in four designs — each made in the 13 functions most frequently used in schools, hospitals, apartments, offices, public buildings and fine residences.

There is a Corbin Distributor or Corbin Representative in your vicinity who will gladly give you complete information about Corbin Cylindrical Locks and assist you with specifications for any type of installation. If you do not know his name and address, we shall be happy to furnish them.

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Corbin distributors are selected for their ability to work with you constructively on builders' hardware specifications. Corbin helps them by conducting two builders' hardware schools each year for distributors' employees.

The quality of their service, together with the fine quality of Corbin products, has made Corbin the most widely used builders' hardware in the world!

# My Morgan Kitchen Suits Me to a "D"

"D" is for Door . . . and for Depth . . . for Detailing . . . for Design. Morgan TRI-PANEL has all 3! Here is the "Picture" door with sculptured beauty, creating ever-changing proportioned patterns of clean, sharp hi-lites and deep, soft shadows. Here is the modern touch to break the monotony of flat, plain, uninteresting surfaces. Grace the openings, make the rooms "sing" with Morgan TRI-PANELS.

This is the  
**MORGAN TRI-PANEL**  
Door of Dimension

M-1073 Interior Door

1 3/4" Thickness  
with 3/4" Hip-Raised  
Panels—2 sides

This is a Modern Morganized Kitchen

Above: M-1073 Tri-Panel and Assembly of Morgan Kitchen Cabinets

Companion to M-1073 Interior Door is Morgan M-117 Exterior Door, 1 3/4" thick with 1 3/4" hip-raised panels, 2 sides. Both available in standard sizes. Keep your Woodwork File up to date. Write for Morgan Catalogs.

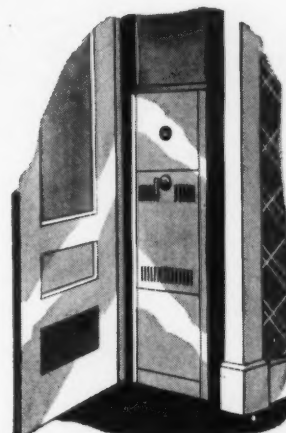
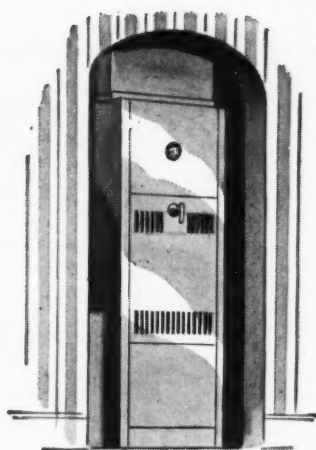
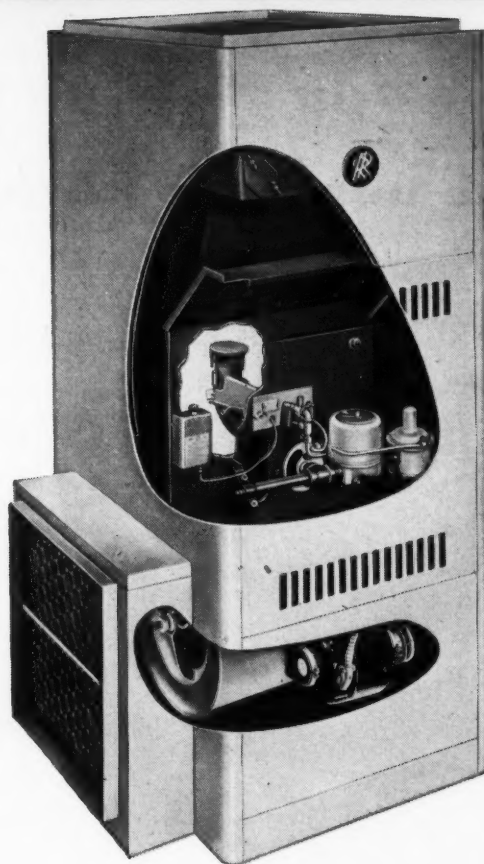
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**SU-30-G**  
85,000 BTU  
input per hour

**SU-35-G**  
110,000 BTU  
input per hour



**AGA Approved!**  
**for alcove and**  
**closet installation**

## Gas-fired RICHMOND winter air conditioner

Where space is tight, use the Richmond SU-G, gas-fired, vertical winter air conditioner... ideal for the small ranch-type installation.

Now the SU-G is approved by the AGA for alcove and closet installation. When ordered for this type of installation our standard unit is especially adapted to meet the rigid AGA requirements. When ordering the Richmond SU-G for closet or alcove use, be sure to state that fact.

Remember that the SU-G can be furnished with a bottom filter rack as optional equipment at no extra charge. And remember these special features: Remote pilot igniter (standard equipment) for convenience and safety in lighting burner from outside of furnace... burner and controls quickly and easily removable as mounting plate is held securely in place with four nuts. When space and economy count... count on the Richmond SU-G.



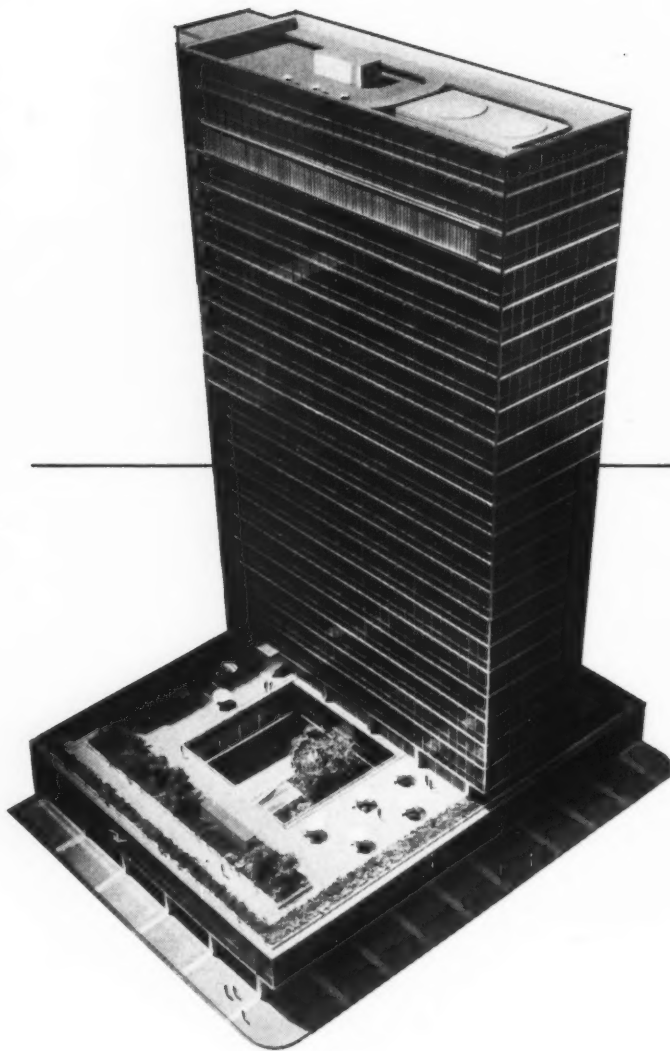
Richmond Radiator Company AR/5  
19 East 47th Street, New York 17, N. Y.  
Please send me full information on Richmond SU-G  
gas-fired winter air conditioners.

Name.....

Company.....

Address.....

## A flying trip through Lever House on those heavenly carpets by Lees!



Park Avenue Elevation of magnificent new Lever House, where Lees Contract Carpets set the decorative keynote. Interior installations by the Contract Division of W. & J. Sloane, New York. Raymond Loewy Corporation, Interior Designers.

Lever House elects Lees! Engineered for tomorrow, Lees Contract Carpets make the perfect floor covering for Lever Brothers' spacious new glass-walled wonder-of-the-world! As visitors travel from floor to floor, from one handsome area to another, they say they get the feeling of being out in stellar space! Here—air, light and perfectly co-ordinated color effects—open the door to a vast new architectural world. Lees Carpets fit perfectly into this great new design for industry. Specially constructed to withstand wear and steady traffic, they come in a wide range of colors, patterns, textures, and custom designs for special interiors. Send for specific information from James Lees and Sons Company, Contract Carpet Division, Bridgeport, Penna., or offices in principal cities.

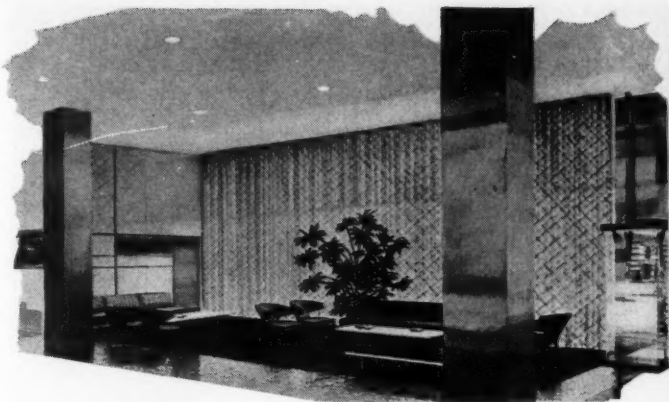


**JAMES LEES AND SONS COMPANY**

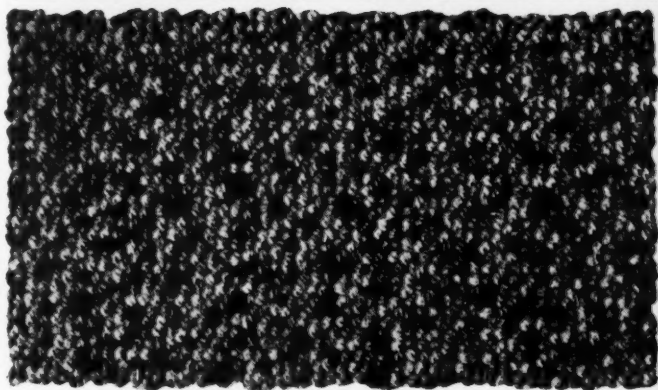
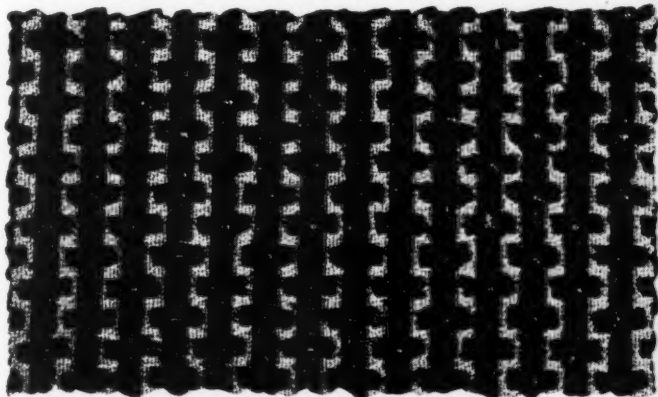
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**MAKERS OF LEES CARPETS AND RUGS**

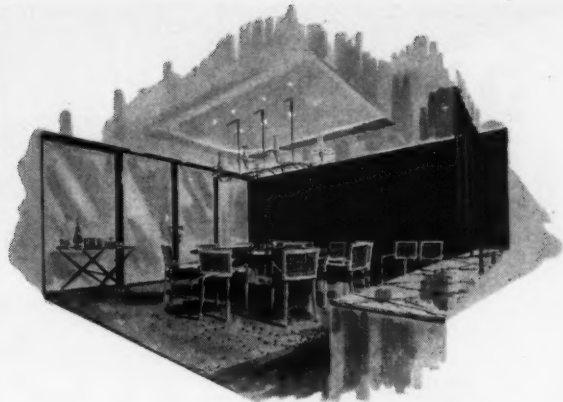
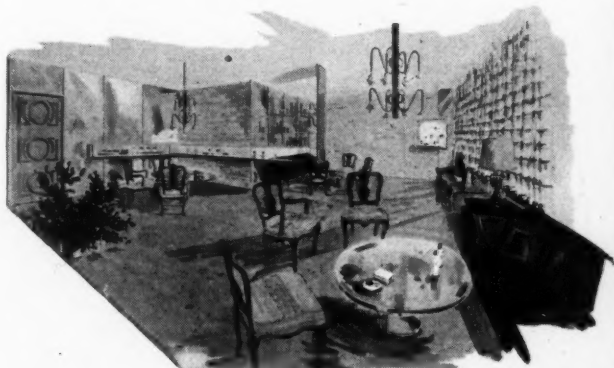




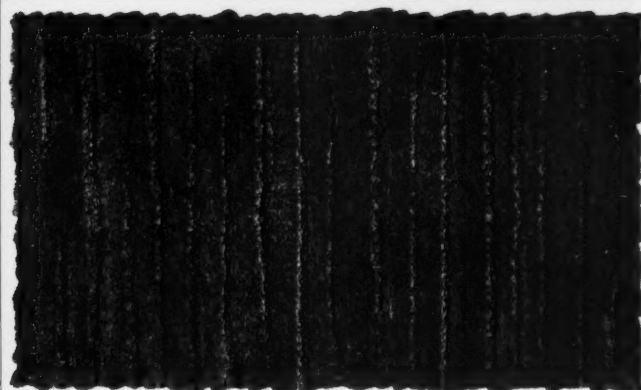
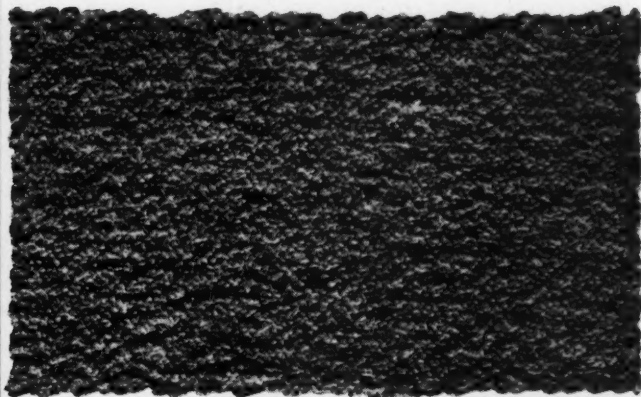
Your first greeting is the long vista of the spacious main lobby. The carpet is a rich textured Wilton specially designed for this impressive space.



A glimpse into Harriet Hubbard Ayer Buyers' Salon gives the visitor a feeling of fashion and feminine delicacy. The carpet is Lees Locksett in soft dusty pink.



Durable dramatic Lees Darlingtong, designed for tomorrow, sets the informal decorative scheme for the Lever House Executive Dining Room on the scenic 21st floor.



Gracious Glowtuft by Lees, an embossed effect Wilton carpet, spreads hospitality and gentle color over the broad expanse of the 21st floor reception plaza.



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— the soundest investment of lighting dollars

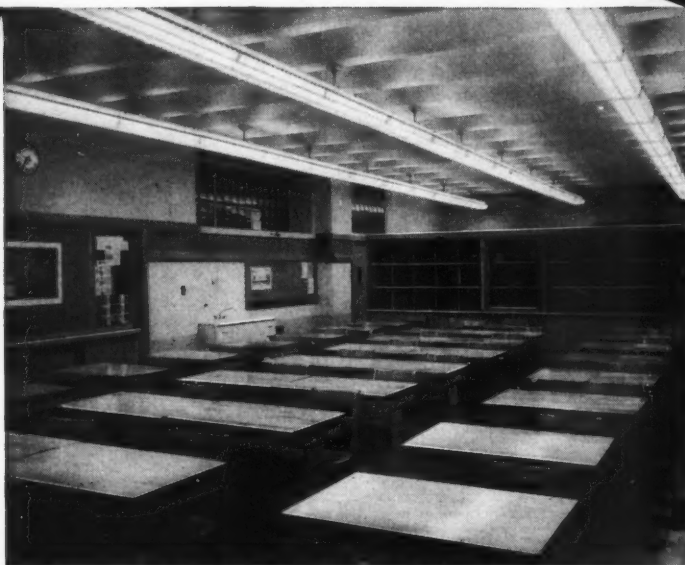


Miller Portland Luminaire

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leaders in lighting  
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The advantages  
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Interior shown is South Mountain Jr. High School, Allentown, Pa.  
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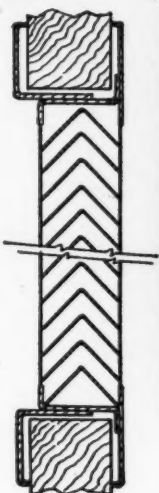


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CUTS COST UP TO  
**35%**

# DOOR and PARTITION GRILLE

**NO SEE-THRU**

● Cut-a-way view shows new auxiliary frame. Quickens installation—makes a smoother appearance.



NEVER BEFORE SUCH A DOOR GRILLE FOR THE MONEY. It's so far ahead in design, construction and performance that it's guaranteed to open your eyes.

Skilled Airfoil designers drew, tested and built it to give architects, contractors and engineers the *finest door grille possible*. It's made to OUTLAST—OUT PERFORM.

First—it's *more rugged*. Will withstand heaviest use and abuse for years and years. Second—it's *low in cost*, competitively priced. Third—it's *good looking*. Will add beauty every time it is installed. Fourth—*louvers are absolutely secure*. Do not rattle when door is slammed.

● **HEAVY GAUGE STEEL. REINFORCED ON EITHER SIDE.**

● **ADAPTABLE TO ANY DOOR WIDTH...MADE TO ANY SIZE.**

● **73% FREE AREA.**

● **ONE-PIECE FRAME.**

● **CUTS DAMAGE AND REPLACEMENT COSTS. NO EXPENSIVE CALL BACKS.**

*Airfoil*  
**AIR CONDITIONING OUTLETS**

**FREE**



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*Easy, Low-Cost Solution To Every Architect's  
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**Handsome Appearance . . . Posture-Designed For Comfort . . . Ruggedly Built For Low Upkeep And Long Life!**

ARCHITECTS everywhere are finding that Samson Folding Chairs allow quick, easy conversion of almost any room to a variety of uses—with complete seating comfort and at low cost.

**Strong enough to stand on!** Tubular-steel construction, cross-braced and electrically welded, means long life, low upkeep. (Gauge of steel meets U. S. Bureau of Standards specifications.)

**Comfortable!** Generously proportioned seats. Posture-curved backs. Noiseless, cushioned rubber feet.

**Safe!** Perfectly balanced—won't tip, tilt or wobble. Safety-guard seat hinge prevents finger injuries.

**Easy handling!** Samson Chairs open and fold as easily as a book. They stack compactly, conserve storage space.

**Special low prices** on quantity purchases. Ask your Samson distributor for quotation, or write us direct.



**FREE TRIAL!** Write us on your letterhead, describing your public seating problem. We will send you, express prepaid, for examination *in your office*, the Samson series 2600 folding chair—America's number one public seating buy!

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Everywhere Choose  
Samson Folding Chairs!**

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
these  products


*They're as Modern as Tomorrow...*

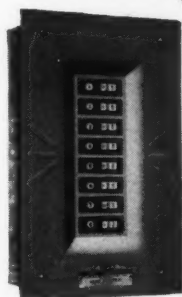
these  Load Centers, Service Equipment and Built-in Electric Quikheters.


Made specifically for use in homes — large and small — and other buildings, these sturdily built units embody all the latest features in design and construction.



They're safe, efficient, dependable, economical, long-lasting and will provide years of trouble-free service. Too, they are approved by the Underwriters' Laboratories, Inc.

The next time you design a residence or other small building, include  Load Centers, Service Equipment and Electric Quikheters in your specifications.



Your nearest  representative, listed in Sweets, will be glad to give you complete information, or write to headquarters for bulletins.




 Load Centers and Service Equipment with thermal-magnetic trip Add-On Circuit Breakers are ideal for residential use . . . available in 2 to 20 circuit assemblies.


 SEPF Fuse-Type Service Equipment with safety-type  Pulfuz-switch main disconnect and plug fuse connections is excellent also for use in homes. Available in 30, 60 or 100 ampere main connections and plug fuse branches. Also range circuits.



 Main and Range Service Units provide fuse protection in a dead front, safety type unit and feature non-interchangeable  Pulfuzswitches for main and range disconnects. Available in 60 and 100 ampere "series" and "parallel" main connections — 4 to 8 branches, with or without water heater circuit.

 Type R Enclosed Cutouts are popular safety-type fuse boxes for homes and other similar size buildings. Furnished with 2 to 20 circuits.



Built-in  electric Quikheters with built-in control switch or thermostat, supply heat that will quickly change a cold, shivery bathroom or other room into one that's warm and cozy — and at a small cost. Quick acting, odorless and noiseless in operation. Available in capacities of 1,000 to 3,000 watts. Separately mounted thermostic control available at extra cost.

## Frank Adam Electric Co.

P. O. BOX 357 ST. LOUIS 13, MISSOURI

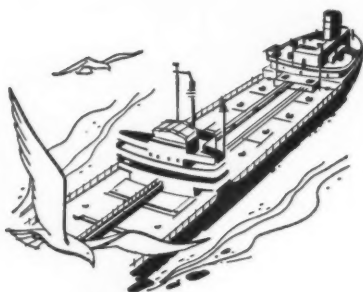
Makers of BUSDUCT • PANELBOARDS • SWITCHBOARDS • SERVICE EQUIPMENT • SAFETY SWITCHES • LOAD CENTERS • QUIKHETER



## American Blower... a time-honored name in air handling



**Tampa, Fla.,** has a conveniently located American Blower Office to provide you with data and equipment for air handling. You can reach American Blower in Tampa by calling 2-2506. In other cities, consult your phone book.



### BON VOYAGE

The very fact that the cargo is *potentially* dangerous requires every precaution for safety on an oil tanker. American Blower fans and blowers more than meet the rigid specifications for ventilating equipment on these vessels. American Blower ventilating equipment includes explosion-proof motors, spark-proof fan wheels and housings and carries Certified Ratings. If this touches on a problem you're facing, our nearest branch office will be glad to help you.



### HOSPITAL COMFORT

A new Veterans' Hospital recently completed on the west coast is going to be mighty comfortable for patients—at least from the standpoint of good ventilation. American Blower Sirocco

Fans are largely responsible. These fans deliver more air per revolution than any other type of fan, operate at lower tip speeds, are quiet, and require only minimum space for installation. Our branch office personnel are experienced engineers who will be glad to furnish complete data on American Blower equipment. Why not call today?



### POWER PLANT NEWS

An American Blower Type ST Fly Ash Precipitator was purchased recently by a leading public utility for installation on the world's largest boiler now under contract. It is a pulverized-fuel fired, dry-bottom type boiler having a continuous rating of 1,450,000 lbs. of steam per hour capacity. The boiler is expected to burn about 147,000 lbs. of coal per hour with a gas volume of 600,000 cfm going into the American Blower Collector. At this rating, approximately 13,000 lbs. of fly ash per hour will be caught in hoppers and transported to storage tanks.

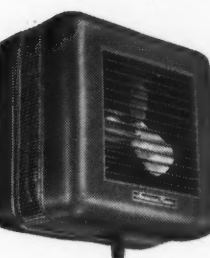
If you're planning to enlarge or expand your facilities, if you're changing from civilian to military production, let American Blower supply you with air handling products to improve comfort and boost efficiency. Phone or write our nearest branch office.

AMERICAN BLOWER CORPORATION, DETROIT 32, MICHIGAN  
CANADIAN SIROCCO COMPANY, LTD., WINDSOR, ONTARIO

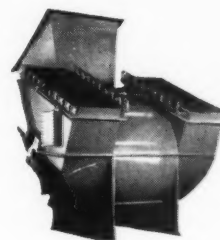
Division of **AMERICAN RADIATOR & Standard Sanitary** CORPORATION

**YOUR BEST  
BUY**

**AMERICAN BLOWER**



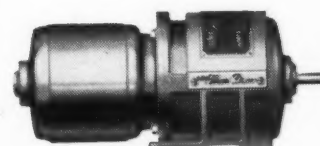
**Unit Heaters**



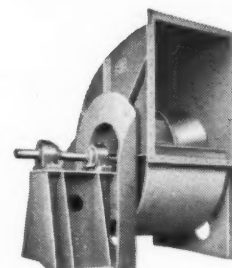
**Mechanical  
Draft Fans**



**Dust Collectors**



**Gýrol Fluid  
Drives**



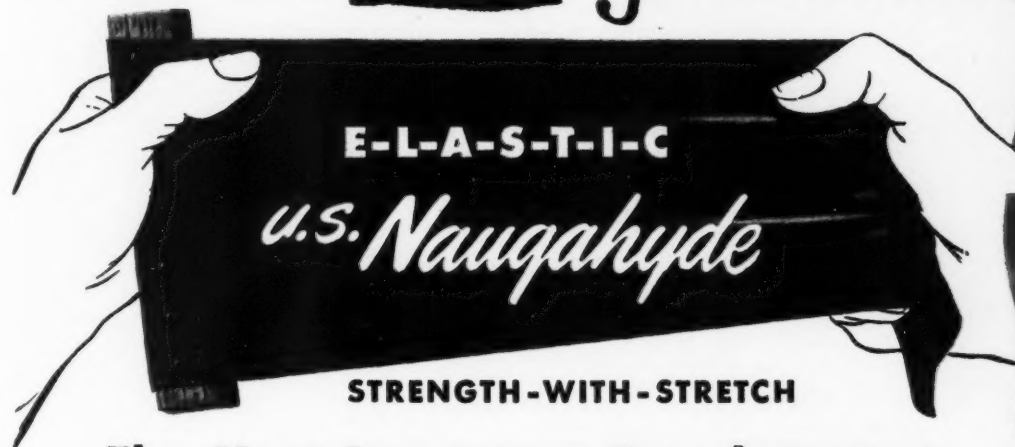
**Industrial Fans**

**AIR HANDLING  
EQUIPMENT**

*Serving home and industry:* AMERICAN-STANDARD • AMERICAN BLOWER • ACME CABINETS • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILERS • ROSS HEATER • TONAWANDA IRON

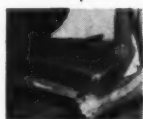


# How the WORD gets around!

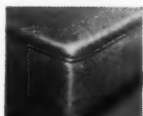


## The Most Important Development in the History of Vinyl Upholstery!

### Step-by-step Proof of the EXTRA ADVANTAGES of strength-with-stretch



Backed with a strong, knitted, stretchable fabric, Elastic Naugahyde is a sturdy, vinyl upholstery material that stretches evenly in every direction.



Tacks hold firmly without tearing; seams, staples won't pull out. No special tools or techniques needed.

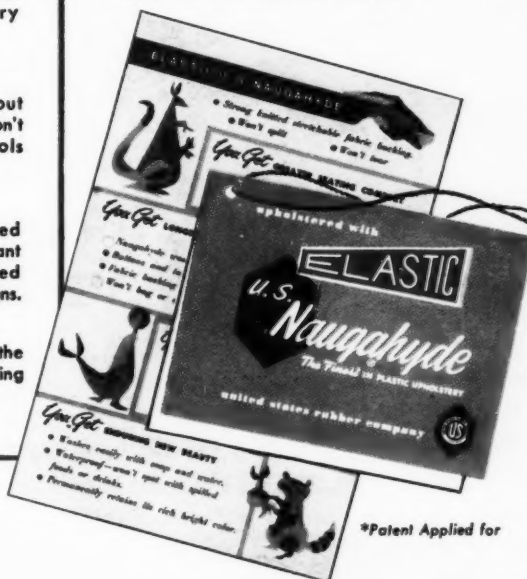


Elastic Naugahyde is rugged and strong—yet so pliant that it can be smoothly fitted to the most "difficult" designs.



Elastic Naugahyde hugs the contours of furniture, offering customers eye appeal from every angle.

Your Customers will be looking for this tag. They know the advantages of Elastic Naugahyde for long, trouble-free wear. Here, indeed, is tomorrow's upholstery fabric—today!



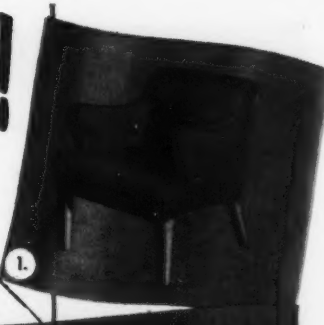
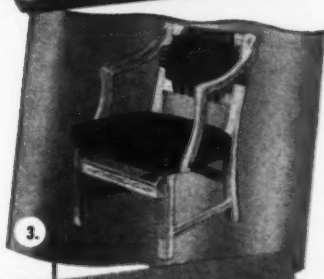
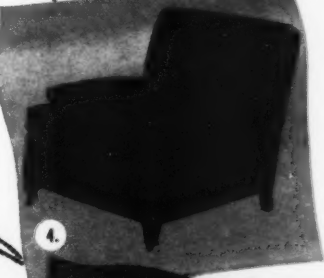
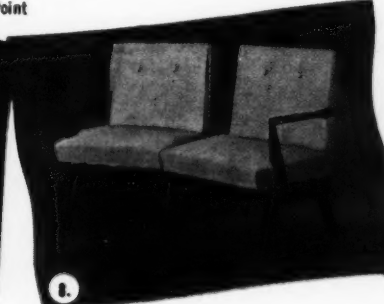
\*Patent Applied for

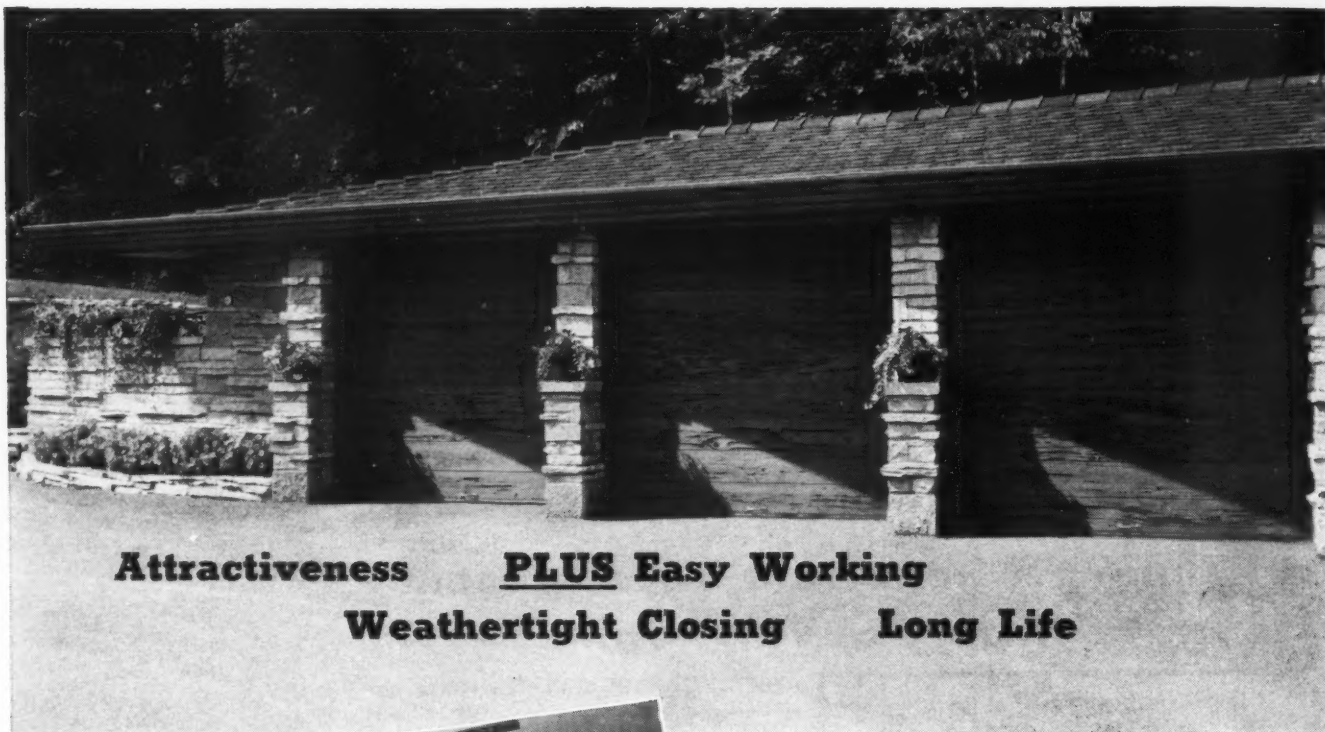


**UNITED STATES RUBBER COMPANY**

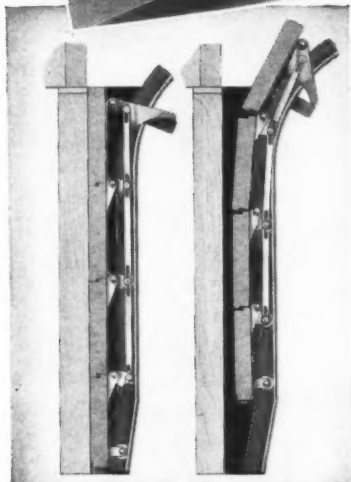
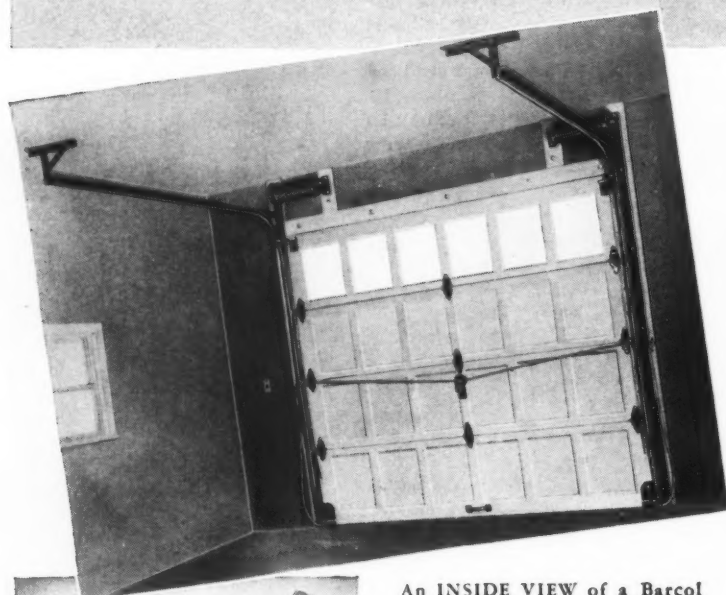
Coated Fabrics Department • Mishawaka, Indiana

1. Franklin Furniture Co.
2. Addison-Wade Co.
3. A. Brandt Co., Inc.
4. Century Furniture Co.
5. Beachley Furniture Co.
6. Kenmar Manufacturing Co.
7. Shaw Manufacturing Co.
8. Imperial Leather Furniture Co.
9. J. L. Chase Co.
10. Tomlinson of High Point



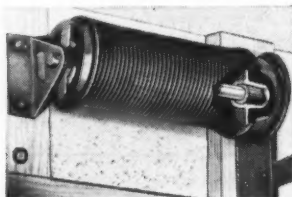


**Attractiveness      PLUS Easy Working**  
**Weathertight Closing      Long Life**



This is how the exclusive Barcol Closing Action works. Right, door closing (moving downward), lever engages stop on track, pulls roller plates up, moves door to left. Left, door closed, roller plates up, door pressed uniformly top to bottom against jamb. Reverse of action gives immediate release on opening.

An INSIDE VIEW of a Barcol OVERdoor, showing sturdy tracks with continuous vertical track brackets, twin springs, strong but light sections designed against warping or twisting, dual self-latching bolts.



Close-up of one of the twin tailored counterbalancing coil springs that help make Barcol OVERdoors so easy working. Airplane steel cable runs from drum *direct* to bottom of door. Roller bearings insure smooth, easy, and quiet operation. Separate adjustments insure exact equal tension on both sides of door.

# Barcol OVERdoors

have  
**HIDDEN as well as  
VISIBLE VALUES**

It takes a lot more than just what you can see *from the outside* to total up the sum of Barcol OVERdoor advantages. Barcol OVERdoors can be made in almost any exterior design desired. Take the special pecky cypress doors shown above — they make a beautiful blend into the design scheme; but the real reasons they *work* well as much as they *look* well — those reasons are *inside* the building. Look at the "inside" pictures and diagrams — here, in the mechanisms and in the hardware, the distinctive qualities of the Barcol OVERdoor are found. Here are the *hidden values* that mark the superior features and the superior performance of the Barcol OVERdoor. Look *inside* as well as outside to learn the whole story. Only then can you know how satisfactory the Barcol OVERdoor can be — *in every way*.

## BARBER-COLMAN COMPANY

102 MILL STREET, ROCKFORD, ILLINOIS

FACTORY-TRAINED SALES AND SERVICE REPRESENTATIVES IN PRINCIPAL CITIES

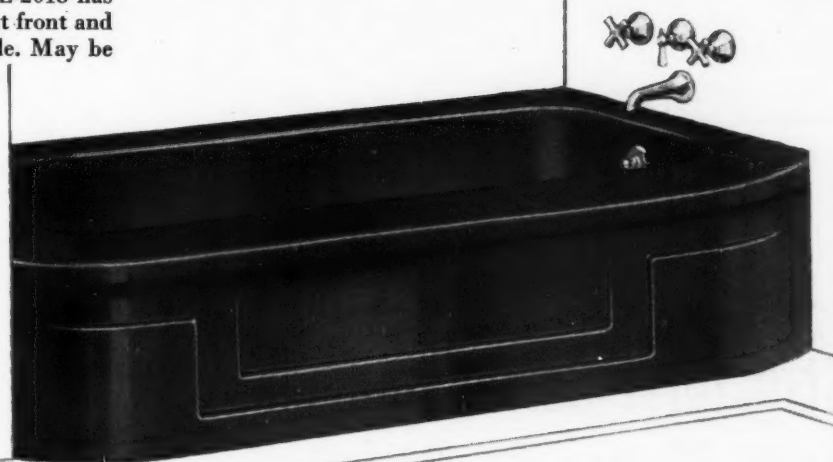




Shelf-back lavatory, porcelain-on-steel Model L-2018 has a bowl of generous capacity with a deep apron at front and sides that creates an unusual smartness in style. May be wall-hung or installed with legs as illustrated.

AllianceWare porcelain-on-steel BA5 bathtub combines three important selling features—(1) an attractive panelled front (2) a wide seat with roll-rim and (3) a convenient height of 15 ½ inches.

*For details of these AllianceWare units, write for complete specification sheets.*



Close coupled reverse trap closet combination in a smartly-styled unit. The design incorporates quiet, efficient, whirlpool jet flushing.

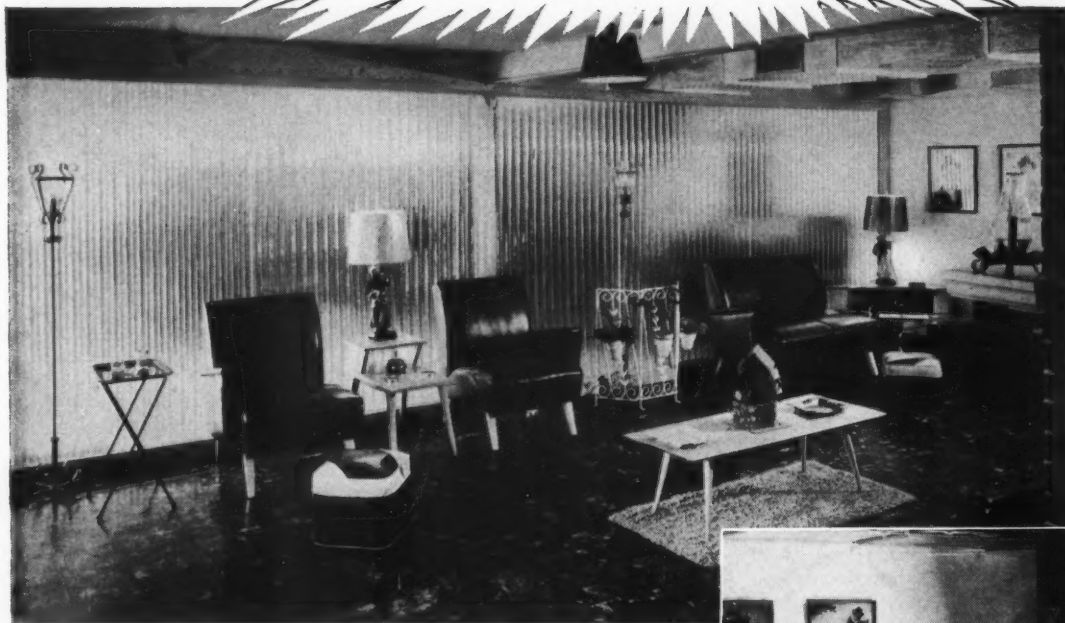
**W**ITH the recent addition of vitreous china closet combinations of recognized quality to the AllianceWare line, you can now install a complete AllianceWare bathroom in any of four decorator color selections—blue, pink, green, and suntan—as well as white.

With stainproof surfaces, modern styling and choice of units matched in color, AllianceWare also possesses practical details of construction and ease of installation that win the praise of architects and builders everywhere. Builders who plan quality homes of long-lasting attractiveness find AllianceWare fixtures offer both *builder* satisfaction and *owner* satisfaction.

**AllianceWare**  
PORCELAIN ON STEEL

**ALLIANCEWARE, INC. • Alliance, Ohio**  
*Bathtubs • Lavatories • Toilet Combinations • Sinks*

# Bright Idea



A wall of light brightens this basement recreation room, adds a modern note of sparkling hospitality to bar (at right.)

## Structural Corrugated Glass Adds Glamor to Rathskeller

This inviting basement room is a mecca for entertaining or family relaxation. The beauty and utility of rhythmic Structural Corrugated glass by Mississippi creates an atmosphere of spaciousness and comfort difficult to achieve in a rathskeller. The entire basement is flooded with "borrowed light," yet garage and storage space are hidden by the translucent glass partitions.



In contemporary construction, architects and designers everywhere are recognizing the place of translucent, light diffusing glass, the modern material. Mississippi Glass is available in a wide variety of patterns and surface finishes wherever quality glass is sold. Consider this fresh, dramatic material to add sparkle to your ideas.



Write today for free new booklets, "Modernize Your Home With Decorative Glass" and "Figured Glass by Mississippi." Photographs of actual installations. Many ideas on ways to use this exciting new medium.

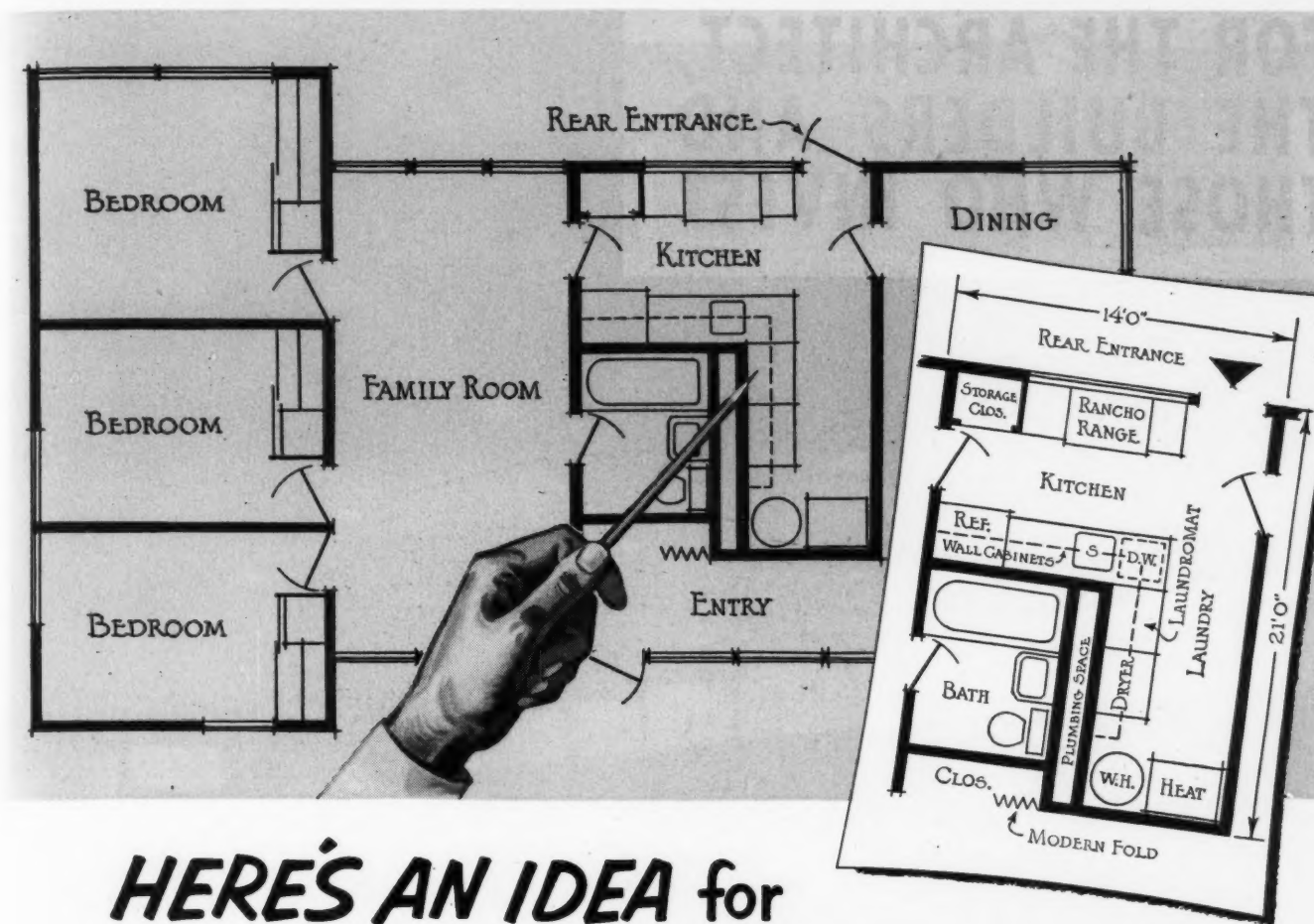


**MISSISSIPPI** *Glass* **COMPANY**  
88 ANGELICA ST. SAINT LOUIS 7, MO.  
NEW YORK • CHICAGO • FULLERTON, CALIF.



WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS





## HERE'S AN IDEA for Compact, Economical Appliance Installation

For greatest economy and efficiency, the appliances required for truly modern living, should be PLANNED into the home while it is still on the drawing board.

The appliances needed to give a homeowner the maximum freedom of living include an electric refrigerator, range, dishwasher, food waste disposer, clothes washer and dryer, water heater and kitchen ventilating fan.

In the layout above, all bathroom, kitchen and laundry equipment have been planned around a plumbing "core" ... and all are but a few feet distant from the electric water heater that serves them.

It's easy to plan Westinghouse Appliances into homes. There are models and sizes for all situations ... for homes in ALL price ranges. What's more, each has a crisp, sparkling style of its own yet a "family" resemblance to each other, all of which tends to enhance the interior appearance of any home.

Send for your copy of the Westinghouse Appliance catalog mentioned in the coupon below. Learn for your-

self why Westinghouse Appliances are preferred by millions of homeowners, *specified* by leading architects and builders everywhere.

... of course, it's electric!

Westinghouse Electric Corporation  
Electric Appliance Division  
Mansfield, Ohio

Gentlemen:

Please send me a Westinghouse Appliance Catalog.

Name

Street

City & State

AR-5

## YOU CAN BE SURE..IF IT'S Westinghouse



FROST-FREE



• VENT FAN



• LAUNDROMAT



• DRYER



• ELECTRIC SINK



• WATER HEATER



• WASTE-AWAY



• RANGE

# FOR THE ARCHITECT, THE BUILDERS AND THOSE WHO INVEST

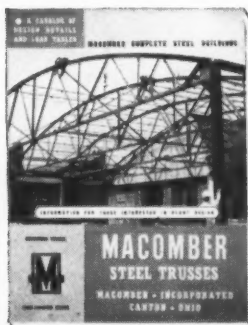


ONE OF THE MACOMBER GROUP  
OF MODERN FABRICATING UNITS

## THESE MODERN FACILITIES WILL AMPLY QUALIFY AS YOUR SOURCE FOR STEEL BUILDING PRODUCTS

Here under many roofs is tangible evidence of what men in construction want in their steel source . . . advanced engineering practice;

coordinated fabricating beamed at honest delivery dates; ample established credit among suppliers and a clean sales policy. Investigate MACOMBER from any standpoint—in person—if you can and we believe your decision will make Macomber your steel source.



STANDARDIZED STEEL BUILDING PRODUCTS

**MACOMBER • INCORPORATED**

CANTON, OHIO

V BAR JOISTS • LONGSPANS • BOWSTRING TRUSSES • STEEL DECK





## tile roofs are modern roofs

The very basis of contemporary architecture as applied to small home design is living *convenience* with the economy of *quality*. If the choice of a roof shares in this kind of thinking, then tile must be evaluated because it is one material that best meets functional requirements.

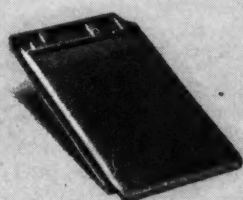
1. Ludowici Tile roofs are permanent; never need the inconvenience of periodic maintenance be considered.
2. Economy is obvious. Being completely weatherproof and fire-proof the first cost is a lifetime investment.
3. From the standpoint of design the textures and various color combinations not only conform to modern design but enhance the typical severity.
4. With correctly engineered construction including truss technique a tile roof for the average home requires no more structural support than any other roofing material.



*Simplified truss construction with spans up to 25' or 30' for low-pitched roofs offer safe support for tile at minimum structural costs*



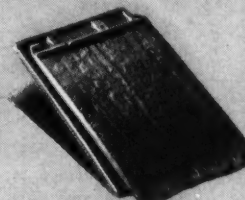
**Williamsburg  
Shingle Tile**



**Lightweight  
Shingle Tile**



**Interlocking  
Tile Stones**



**Early American  
Shingle Tile**

Ludowici Roofing Tiles of today with their adaptable shapes are not the traditional pattern of yesterday. They are consistent with the modern motif and have been used in the work of many outstanding architects. See our catalog in Sweets. Further information and samples will be gladly sent on request.

### **LUDOWICI-CELADON CO.**

Suite 1201, 75 East Wacker Drive, Chicago 1, Illinois

New York 17, N.Y. -  
565 Fifth Ave.  
Washington 5, D.C.  
740 - 15th St., N.W.

Dallas 9, Texas  
4801 Lemmon Ave.  
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12734 Woodland Ave.

# For tough assignments, specify Roddiscraft solid core flush doors

For  
HOSPITALS  
SCHOOLS  
APARTMENTS  
HOTELS  
INSTITUTIONS



**Doors lead a tough life in public buildings. Roddiscraft Solid Core Flush Veneered Doors are built to take it.**

**FIRE RESISTANT** — exceed a regular fire test for over 40 minutes. Provide extra protection where needed in multiple and single dwelling units.

**SOUND RESISTANT** — develop an average sound transmission loss of 30.9 decibels — only a little less than specially constructed sound retardant doors of much greater cost.

**RESISTANT TO ABUSE** — core, crossbandings and face veneers welded into a single unit with the inherent strength of true plywood construction.

**WATERPROOF** — for exterior and interior use. Phenolic resin glue provides two completely waterproof shields over entire area of the door on each side of the core.

**STANDARD THICKNESS FACE VENEERS** — provide greatest resistance to checking and abuse — permit better matching.

*Specify Roddiscraft Solid Core Flush Veneered Doors for the tough assignments.*

## NATIONWIDE Roddiscraft WAREHOUSE SERVICE

Cambridge, Mass. • Charlotte, N. C. • Chicago, Ill. • Cincinnati, Ohio • Dallas, Texas • Detroit, Michigan • Houston, Texas • Kansas City, Kan. • New Hyde Park, L. I., N. Y. • Los Angeles, Calif. • Louisville, Ky. • Marshfield, Wis. • Milwaukee, Wis. • New York, N. Y. • Port Newark, N. J. • Philadelphia, Pa. • St. Louis, Mo. • San Antonio, Texas • San Francisco, Calif.

## Roddiscraft

RODDIS PLYWOOD CORPORATION

Marshfield, Wisconsin



# 15 ACRES of AMERICA'S FINEST ROOF DECK

American Stores Co.,  
New Warehouse and Bakery  
Philadelphia, Pa.



Ganteaume & McMullen:  
Engineers—Architects

Hughes—Foulkrod Co.:  
General Contractor

**... It's Kaylo Roof Tile — Lightweight,  
Strong, Insulating and Incombustible!**

Kaylo Insulating Roof Tile is hydrous calcium silicate—the lightweight structural material that offers numerous advantages. Although Kaylo Tile *exceeds* the strength requirements for typical roof loads, a Kaylo roof deck weighs *only* 6 pounds per square foot. This means lighter foundations, a lighter supporting structure . . . substantial savings of structural steel.

The insulating value of Kaylo Tile, equal to one and one-half inches of standard insulation board, saves on heating and cooling costs. Since Kaylo Tile

is incombustible, it offers protection against fire. The tile resists moisture damage and it is rot-proof.

A Kaylo roof deck also forms a completed ceiling. The tile's near-white underside reflects light and requires no painting. Kaylo Tile is easily handled and placed, thus saving construction time.

These are just a few of the facts to show Kaylo Insulating Roof Tile's ideal combination of qualities—advantages which offer you economical construction, permanence and all-around satisfaction.

WRITE FOR FREE BOOK—"Kaylo Insulating Roof Tile." Address: Dept. N-214, Owens-Illinois Glass Company, Kaylo Division, Toledo 1, Ohio.

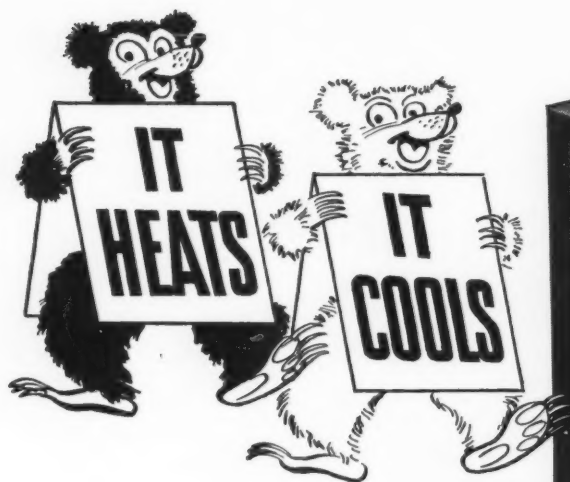


# KAYLO® . . . first in calcium silicate

...pioneered by OWENS  ILLINOIS Glass Company

MAIN OFFICE: TOLEDO 1, OHIO — KAYLO SALES OFFICES: ATLANTA • BOSTON • CHICAGO • CINCINNATI • CLEVELAND • DETROIT  
HOUSTON • MINNEAPOLIS • NEW YORK • OKLAHOMA CITY • PHILADELPHIA • PITTSBURGH • ST. LOUIS • WASHINGTON

Don't let old-fashioned radiators stymie modernization plans



IDEAL FOR STORES, SHOWROOMS, SCHOOLS, BANKS, HOTELS, HOSPITALS, THEATERS, CHURCHES, OFFICES, VESTIBULES AND OTHER COMMERCIAL AND PUBLIC BUILDING AREAS



Type C with optional plenum base for floor mounting

## Modine Cabinet Units simplify remodeling... save space...permit addition of cooling

### WHAT YOU GAIN when you replace old- fashioned radiators with Modine Cabinet Units

SPACE	Cabinet Units occupy only a portion of space taken by radiators.
CONCEALMENT	Cabinet Units can be built-in or installed outside of rooms served.
COOLING	You can have both heating and cooling in a single unit.
VENTILATION	Attachment of optional plenum-damper base permits fresh air introduction.
AIR CIRCULATION	Quiet blower fans provide positive air distribution.
APPEARANCE	Attractively styled cabinets blend with modern decor.

THERE'S no need to accommodate unsightly, existing radiators in modernization work. One attractive Modine Cabinet Unit can replace up to three or more radiators...frequently with no change in piping.

Mounted on the floor, wall or ceiling, Cabinet Units take little space. When installed with ducts they can be completely concealed above a false ceiling or behind a partition.

Where desired, chilled cooling and hot water heating can be provided with a single unit for year 'round comfort. Other models for steam or hot water heating only. Fresh air introduction is possible through use of an optional plenum base.

Not as elaborate or expensive as unit ventilators or air conditioners, Modine Cabinet Units are economical to use. What's more, the scrap value of the radiators they replace defrays part of their cost. (For example, a 280 lb. Modine Cabinet Unit replaces 3200 lbs. of cast iron radiation.) Available in five sizes from 120 to 640 Edr.

For complete information write for free illustrated Bulletin 550. Modine Manufacturing Company, 1510 De Koven Ave., Racine, Wis. C-1149

WRITE FOR FREE  
BULLETIN 550

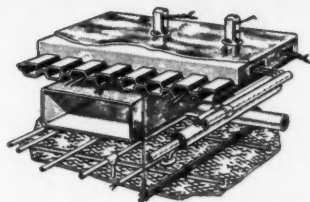


**Modine**  
**CABINET UNITS**  
FOR HEATING & COOLING



# *Time is your variable*

**ROBERTSON PRE-ENGINEERED MATERIALS CUT CONSTRUCTION COST**

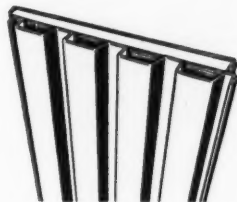


## **Q-FLOORS**

two men can lay 32 sq. ft.  
in 30 seconds!

These are steel subfloors. They are installed as fast as the frame is erected. Therefore they form immediate and permanent platforms for all subcontractors. By properly organizing the work, a contractor can cut 15 to 20% off over-all construction time. The architect saves a great deal of drafting time.

The steel cells of Q-Floor become raceways for all electrical systems. An electrician drills only a small hole and installs an outlet on any six-inch area of floor in a matter of minutes. Desks, business machines and partitions can be located with complete freedom, after tenants move in.



## **Q-PANELS**

50 sq. ft. of insulated, finished  
wall in 9 minutes!

Q-Panels are only 3" thick but have greater insulation value than a 12" masonry wall. They arrive at the site cut to fit and are quickly attached to the steel frame.

The inside surface is a metal sheet, then comes insulation, then the outer skin of fluted aluminum, Galbestos, stainless or metal-coated steel, depending upon the utility and architectural requirements.



## **GALBESTOS**

**METAL SIDING & ROOFING**  
enables workmen to cover up to 2½  
times as much area as competitive  
materials.

Galbestos metal is the ideal material for corrosive industrial exposures, withstanding the most extreme climatic conditions, and requires no maintenance.

Galbestos is steel to which asbestos felt is metal-lically bonded. The felt is then impregnated with asphalt and weatherproofed. Available in various forms, in two standard widths and in lengths up to 12 feet. Galbestos has been tested and classified by Underwriters' Laboratories, Inc., and Factory Mutual Laboratories. It is available in black or maroon or can be field painted.

Galbestos roofing and siding is fastened by the exclusive Robertson Top-Speed Method, a completely new system which eliminates all interior scaffolding. This is why Galbestos is faster to erect. It can be insulated by an equally fast method, greatly reducing construction cost for heated buildings.

**WHAT WE REALLY MAKE IS TIME**

### **WRITE FOR THESE FREE CATALOGS**

1. Q-Floors
2. Q-Panels
3. Galbestos
4. Top-Speed Fastening for Galbestos
5. Top-Speed Insulation for Galbestos

## **H. H. ROBERTSON CO.**

2404 Farmers Bank Building  
Pittsburgh 22, Pennsylvania



Offices in ALL Principal Cities  
in the U. S. A. and Canada

World-Wide Building Service



**Wheeling**

**Steelcrete**

**ExM Vault Reinforcing**

For the Federal Reserve Bank of San Francisco's newest branch in Portland, Oregon, it's a solid concrete vault reinforced with Steelcrete ExM Vault Reinforcing.

Not woven, not welded, but pierced and stretched from a single plate of solid steel, ExM proves the most easily placed and most highly resistant reinforcing known for modern bank vaults. Vault Reinforcing is but one of many materials for which architects, engineers and

builders turn to Wheeling. The Wheeling line of building materials includes: Steelcrete Reinforcing Mesh • Expanded Metal • Metal Lath and Metal Lath Accessories • Tri-Rib Steel Roof Deck • ExM Angle Frame Partitions. Wheeling Steelcrete Vault Reinforcing supplied and erected by SOULE STEEL COMPANY. Architect: PIETRO BELLUSCHI; Consulting Engineer: MILES KAYE COOPER; General Contractor: ROSS B. HAMMOND CO.

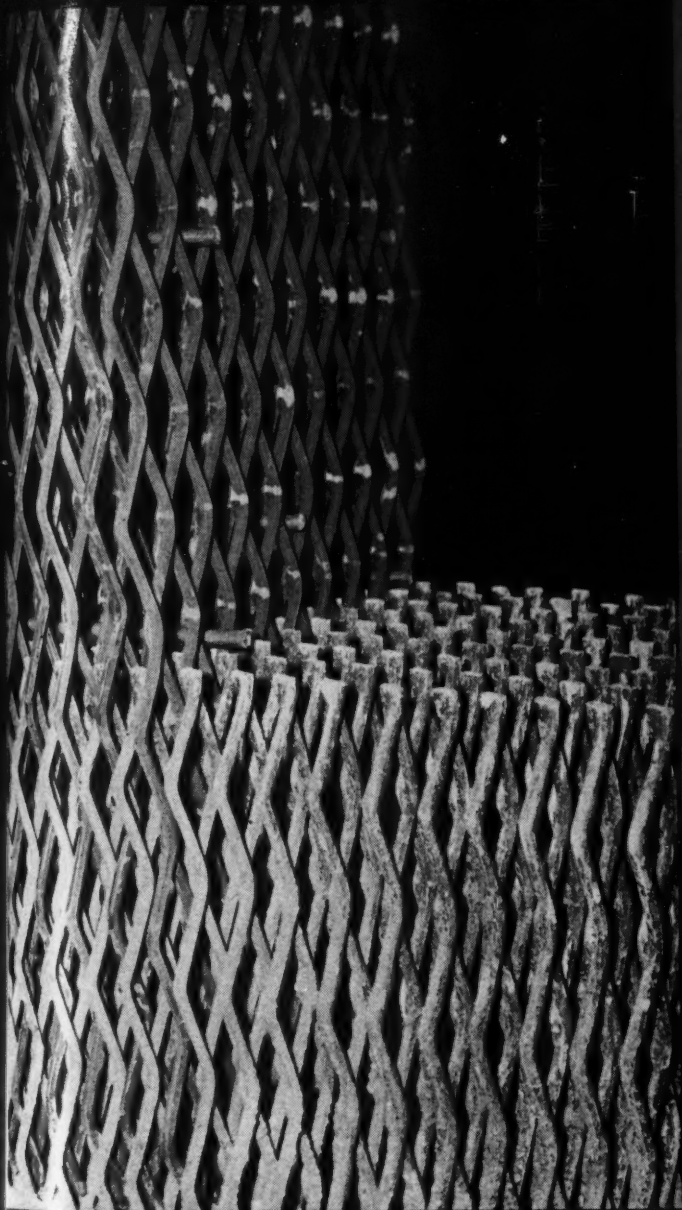
**WHEELING CORRUGATING COMPANY • BUILDING MATERIAL DIVISION**

ATLANTA BOSTON BUFFALO CHICAGO COLUMBUS DETROIT KANSAS CITY LOUISVILLE MINNEAPOLIS NEW ORLEANS



# FEDERAL RESERVE...

*Here in this close-up is seen the sturdy interlaced reinforcing that Steelcrete gives to concrete walls.*



*In this photograph the simplicity of Steelcrete assembly is readily seen.*



*In the roof view, note the relatively long spans made possible by Steelcrete's lateral stiffness.*



**WHEELING, WEST VIRGINIA**

NEW YORK PHILADELPHIA RICHMOND ST. LOUIS

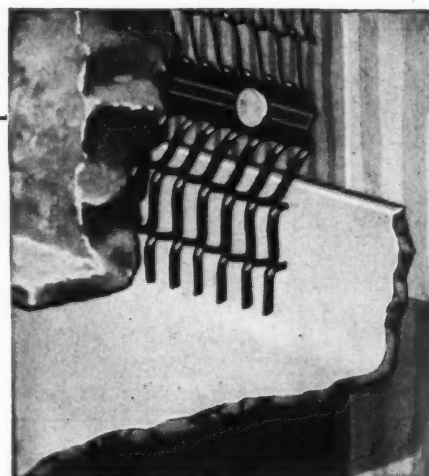






*none of this with a Briggs bathtub—it's leakproof!*

No dripping ceilings under Briggs Beautyware bathrooms! These revolutionary die-formed steel fixtures take care of this problem—and untie every *other* knot in the business! Briggs bathtubs are *lighter*—(only 110 pounds), and stronger. Briggs tubs are *safer*—thanks to the patented Safety-Bottom, the helpful hand grip. Briggs tubs give you *uniform quality*: every tub is furnished in stainproof (acid-resistant) porcelain enamel. Briggs fixtures fit *exactly*—because of their close tolerance engineering. Yet with *all* these extras, Briggs fixtures are modestly priced! Write now for new catalog featuring Briggs plumbing fixtures and Briggs brass. Briggs Manufacturing Company, 3027G Miller Avenue, Detroit 11, Michigan.

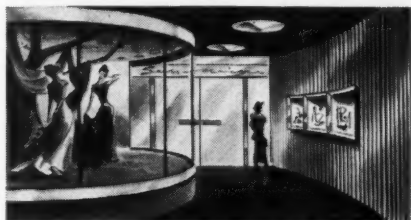


*Briggs solves the danger of leaks at tub-wall line—with an integral lip flange. This provides a perfect flashing—a permanent water seal—tub to walls.*

**BRIGGS** *Beautyware*

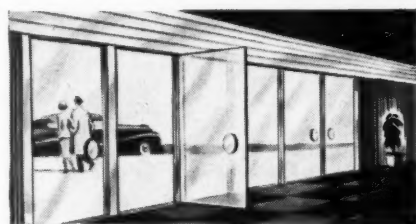
## Architectural Service

### Modern Store Fronts



No metal offers greater flexibility in design than aluminum—one of the reasons why Reynolds Aluminum is so often used in the design of modern store fronts. In addition, aluminum blends well with other materials, does not streak or stain other surfaces, stays bright and keeps its trim neatness. Extruded and roll-formed aluminum shapes for structurals and trim and aluminum fasteners are available for most requirements. Special shapes are easily and inexpensively extruded.

### All Type Doors



Lightweight, rustproof aluminum offers architects the ideal metal for exterior and interior doors—hinged doors, pivot doors, revolving doors, overhead roll-up doors, combination storm-screen doors—in fact, practically all types for commercial and domestic use. The strength, attractiveness, low cost, versatility of extrusions and other characteristics of aluminum provide architects with unlimited possibilities for achieving the most in utility, appearance and durability in doors of both standard and special design.

### Efficient Lighting



Aluminum's high reflection efficiency, natural beauty and unlimited applications in architectural design also make it ideal for most lighting installations. Aluminum reflects up to 85% of light. It polishes to a mirror brightness for highlighting or can be etched for soft diffusion and indirect lighting. Its neat appearance is not marred by time and cleaning. Standard factory assembled units are suitable for many installations and aluminum sheet and extrusions provide wide flexibility for special designs. Write to Reynolds for details on these and any other architectural aluminum applications.



## Put Reynolds Architectural Service to Work on Your Design



You need a "sharp pencil" today to keep building costs within the client's budget and still maintain your reputation. Part of the answer comes in building better and building faster with aluminum—the only mass-produced metal that costs less today than before World War II.

Aluminum is flexible in design, light but strong and easy to work with standard carpenter tools. To give you the most from aluminum—Reynolds, besides supplying this high quality metal, also offers specialized help through the Reynolds Architectural Service.

This service is available to architects for the asking. It is set up to answer aluminum design and construction questions and to help contractors in building better, building faster with aluminum—the *light metal* that's the *right metal* for every type of construction.

For complete information call the Reynolds office listed under "Aluminum" in your classified telephone directory or write direct.

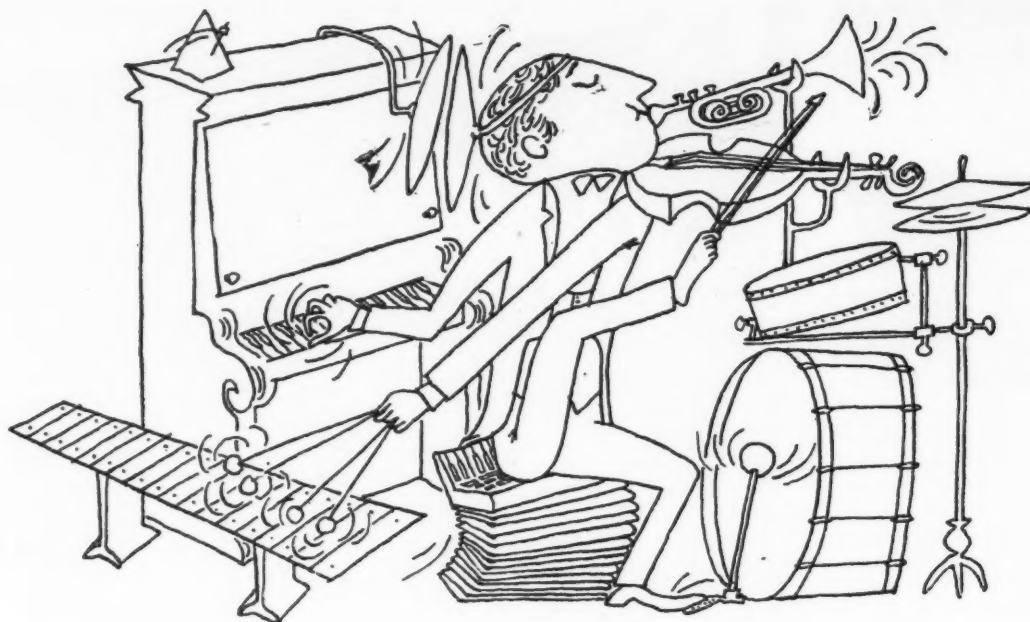
### FREE BOOKLET!

Send for your copy of Reynolds Architectural Folio today! A complete, up-to-date kit on architectural aluminum. In loose leaf form with drawings for direct tracing. Free when requested on business letterhead. Write to Reynolds Metals Company, 2572 So. Third St., Louisville 1, Ky.



# REYNOLDS ALUMINUM





## Air conditioning can be in concert too

If you've had problems air conditioning buildings that have a variety of heat loads, here's news that'll be music to your ears.

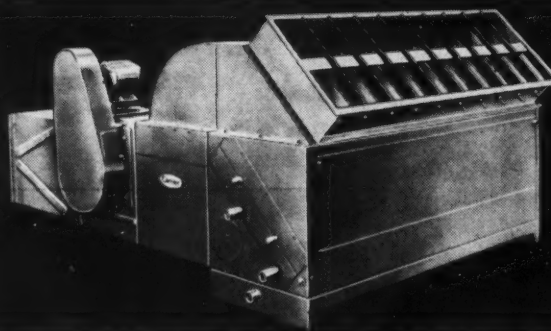
Our new Zoning Weathermaker is a year-round air conditioning unit that gives accurate temperature control of several different zones at the same time. A blow-through fan coil system, there are 14 possible zones available, each zone having a hot and cold damper placed at 90 degrees to each other, so one is closed when the other is open. And any degree of modulation is possible.

Sectionalized for easy installation, the Zoning Weathermaker can be suspended from the ceiling or floor mounted. And for greater flexibility of application, all piping connections can be made from either side.

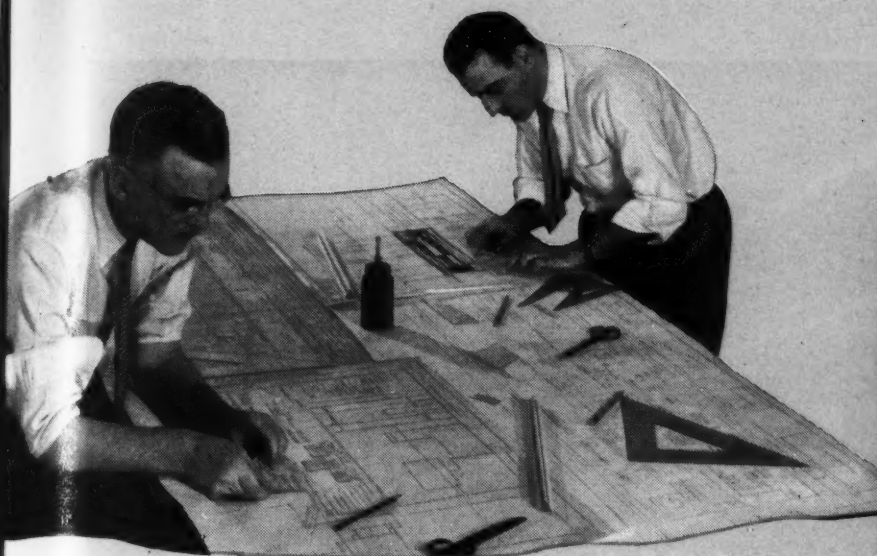
This new Weathermaker joins Carrier's great family of products . . . products matched in size and performance to work together . . . products to meet every industrial or comfort air conditioning requirement your client may have. Carrier Corporation, Syracuse, New York. . . . *for 50 years — the people who know air conditioning best.*

**Carrier**

AIR CONDITIONING  
REFRIGERATION  
INDUSTRIAL EQUIPMENT



The Carrier Zoning Weathermaker, available in 5 sizes with cooling coils in 4 or 6 row direct expansion . . . or 4, 6 and 8 row cooling coils for brine or chilled water. Cooling capacities from 15 to 80 tons, 4100 to 16,400 cfm.



## The American Brass Company, Waterbury, Conn., reports Plant layout speeded

### with Kodagraph Autopositive Paper

**T**HE engineering and drawing reproduction departments of The American Brass Company must keep pace with the constant plant-layout demands of ten manufacturing divisions. *And here's how Autopositive Paper saves time and dollars in this work.*

**First**, paper cutouts of machines and equipment are pasted in position on a whiteprint of the proposed layout. From this opaque pasteup, a positive reproduction on Autopositive Paper is made *directly*. There's no negative step, no darkroom handling with this revolutionary photographic intermediate material. Just exposure in a

standard whiteprint machine... processing in standard photographic solutions.

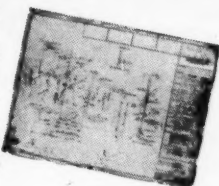
Then, the Autopositive intermediate—with dense photographic black lines on a durable, evenly translucent base—is used to produce the desired number of prints. These are sent to the branch involved to be studied and returned with comments.

**This procedure may be repeated half a dozen times** until complete agreement is reached on the final layout. And *every time* revolutionary Autopositive Paper saves time and dollars!

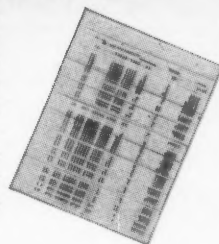
### Other important uses of Kodagraph Autopositive Paper at American Brass



... to reproduce the blueprints and direct-process prints which the various divisions receive from vendors. The Autopositive intermediates are then used to produce any number of shop prints.



... to reclaim old, soiled, or worn drawings. Autopositive Paper intensifies line details... drops out smudges, creases—delivers intermediates which produce clean whiteprints and blueprints.



... to speed print service to all departments. Autopositive reproduces production reports, parts lists, documents of every type. And opaque originals can be copied as readily as translucent ones.

## Kodagraph Autopositive Paper

**"THE BIG NEW PLUS" in engineering drawing reproduction**

Learn how Kodagraph Autopositive Paper is simplifying routines in thousands of concerns. Write today for a free copy of "New Short Cuts and Savings" for interesting facts about companies you know... and a revolutionary new product *you should know*.

#### MAIL COUPON FOR FREE BOOKLET

EASTMAN KODAK COMPANY, Industrial Photographic Division, Rochester 4, N. Y.

Gentlemen: Please send me a free copy of your new illustrated booklet, "New Short Cuts and Savings."

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95

**Kodak**  
TRADE-MARK





*Waiting Room — Southeastern Greyhound Bus Terminal, Birmingham, Alabama*

## ***These monolithic ceilings were sound-conditioned with a trowel***

**H**ERE'S how to speed up many jobs and keep costs down — specify Gold Bond Acoustical Plaster and let your contractor sound-condition and decorate the ceilings in one easy continuous operation. Gold Bond Acoustical Plaster is:

**ECONOMICAL.** Provides incombustible acoustical treatment at low cost.

**ARCHITECTURALLY FLEXIBLE.** May be applied to flat or curved surfaces. Also to existing ceilings after applications of an asphalt emulsion bonding coat.

**EASY TO APPLY.** Gold Bond Acoustical Plaster can be applied by any journeyman plasterer to the regular base coat of gypsum plaster. It's light on the hawk, extremely easy to work.

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**FIRE RESISTANT.** Basically a mineral product, Gold Bond Acoustical Plaster is incombustible.

**NON-GLARE LIGHT REFLECTION.** Oyster white...70%.

**NOISE REDUCTION.** .55 to .60 floated or troweled to finish.

**PAINTABILITY.** Tests with six coats sprayed-on paint showed no loss in acoustical efficiency.

Gold Bond Acoustical Plaster Technical Folder, A.I.A. 39-B-1 supplied without charge upon request.

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*Lath, Plaster, Lime, Sheathing, Gypsum Roof Decks, Wall Paint, Textures, Rock Wool Insulation, Metal Lath, Sound Control Products, Fireproof Wallboards and Decorative Insulation Boards.*



*Lunch Room — Southeastern Greyhound Bus Terminal, Birmingham, Alabama*

**You'll build or  
remodel better with  
Gold Bond**





Private office of W. H. Upson, president of The Upson Company, after modernization and painting according to COLOR DYNAMICS.

## Experience proves Pittsburgh COLOR DYNAMICS produces these 4 important results—

1. lessens eye fatigue
2. stimulates concentration and improves efficiency and morale
3. reduces absenteeism
4. simplifies housekeeping problems

**C**OLOR IN OFFICES is gaining in importance as knowledge increases of its psychological and physical effect on those who work in them. Science has proved that some colors excite and stimulate; others soothe and relax; still others depress, fatigue and irritate.

● **Pittsburgh** has put this knowledge of the *energy in color* to practical use in its painting system of COLOR DYNAMICS. That's why more and more operators, architects and builders of private and commercial office buildings are using this method to select colors for interiors that are

more comfortable to work in as well as more attractive to look at.

● **Typical of the comments** of executives who have successfully applied COLOR DYNAMICS in their offices are these of W. H. Upson, president of The Upson Company, Lockport, N. Y., one of this country's leading manufacturers of fibre wall panels.

● **"After more** than a quarter-century of use our offices had become cramped and out-of-date," says Mr. Upson. "We engaged Walter Dorwin Teague, noted industrial designer, to modernize our facilities. Results have exceeded our utmost expectations. Our

space is better utilized. Changes in lighting fixtures give us better illumination. The new colors, chosen according to the principles of COLOR DYNAMICS, aid those who use these offices to see better, work better and sell better, besides giving them greater pride in their surroundings.

● **"These offices** have also become a definite business asset as they lend prestige to our company and products. They serve as model salesrooms in which we have our best opportunity to demonstrate to jobbers, dealers and contractors the beauty, utility and efficiency of our various panel materials for walls and ceilings."

### We'll Make a Color Engineering Study of Your Offices — FREE!

● For a complete explanation of COLOR DYNAMICS and what it can do for your offices you are planning or building, send for our *free* booklet containing many practical suggestions. Or better still, let us make a color engineering study of your building, or any portion of it, *free and without obligation*. Call your nearest Pittsburgh Plate Glass Company branch and arrange to have one of our trained color experts see you at your convenience. Or send this coupon.

### SEND FOR A COPY OF THIS BOOK!

Pittsburgh Plate Glass Co., Paint Div.  
Department AR-52, Pittsburgh 22, Pa.  
☐ Please send me a FREE copy of your Booklet "Color Dynamics."  
☐ Please have your representative call for a Color Dynamics Survey without obligation on our part.



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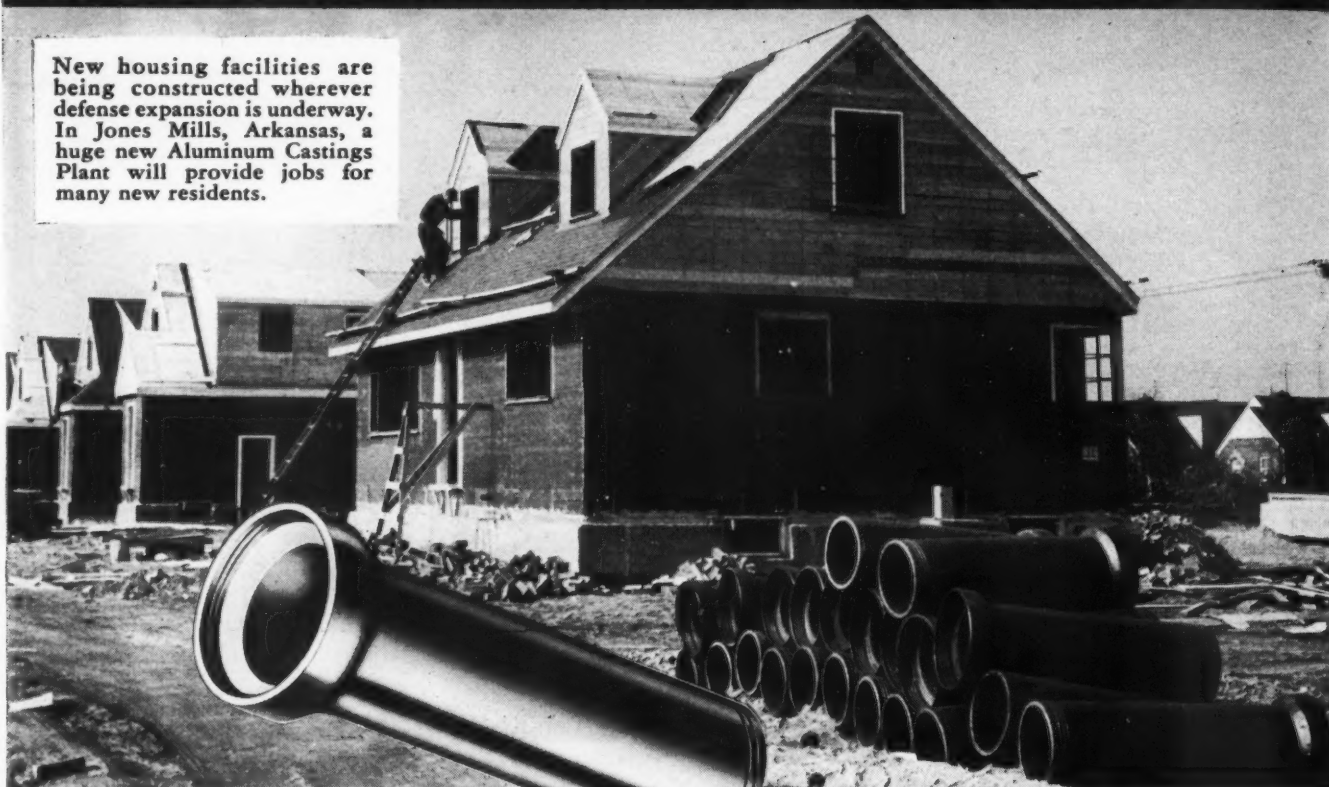
# PITTSBURGH PAINTS

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

## CLAY PIPE-ESSENTIAL ★ ECONOMICAL ★ EVERLASTING

New housing facilities are being constructed wherever defense expansion is underway. In Jones Mills, Arkansas, a huge new Aluminum Castings Plant will provide jobs for many new residents.



# Take advantage OF PLENTIFUL CLAY PIPE

## TO MEET DEFENSE HOME BUILDING DEADLINES

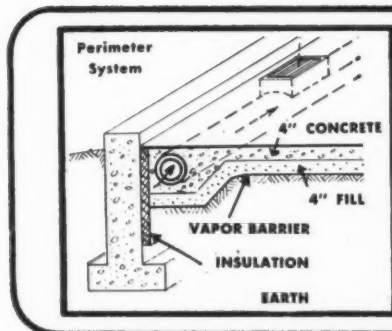
When you write specifications for building sewers or drains, you can count on Vitrified Clay Pipe to help keep the job on schedule. It's the one *plentiful* pipe that has proven its worth through year after trouble-free year of performance. It's the one non-critical material that's *sure* to last.

Clay Pipe is readily available and has a matchless reputation for permanent, everlasting service. Protect your own good name by using it to meet today's hurry-up

building deadlines. It's the only pipe you can *rely* on to resist acid, rust, rot, and decomposition—tomorrow, and fifty years from now. It never wears out.

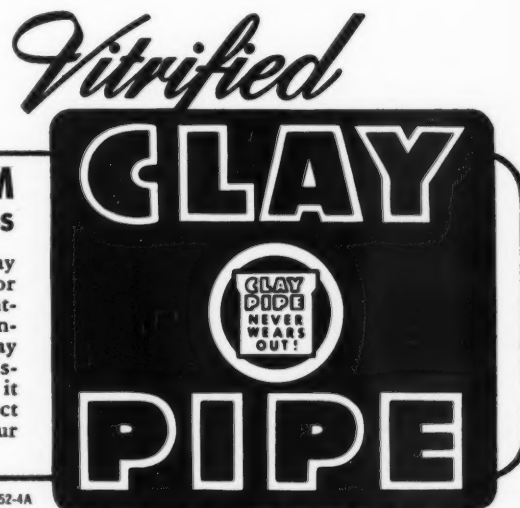
### NATIONAL CLAY PIPE MANUFACTURERS, INC.

206 Connally Bldg., Atlanta 3, Ga.  
100 N. LaSalle St., Rm. 2100, Chicago 2, Ill.  
703 Ninth & Hill Bldg., Los Angeles 15, Calif.  
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### NEW HEATING SYSTEM WORKS BETTER — COSTS LESS

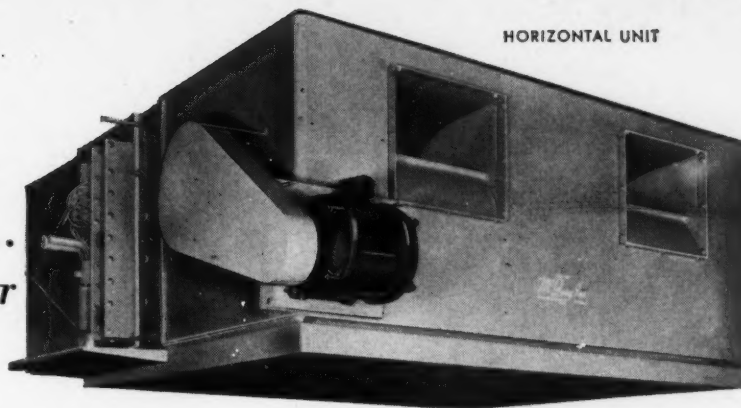
Check the advantages of Vitrified Clay Bell and Spigot Pipe heating ducts for low-cost, efficient heating of basement-less buildings. Pour the concrete foundation-slab right on top of your Clay Pipe network—it's unaffected by moisture, furnace gases, or lime . . . and it combines all the advantages of direct and radiant heating. Write to your nearest NCPMI office for details.



C-352-4A



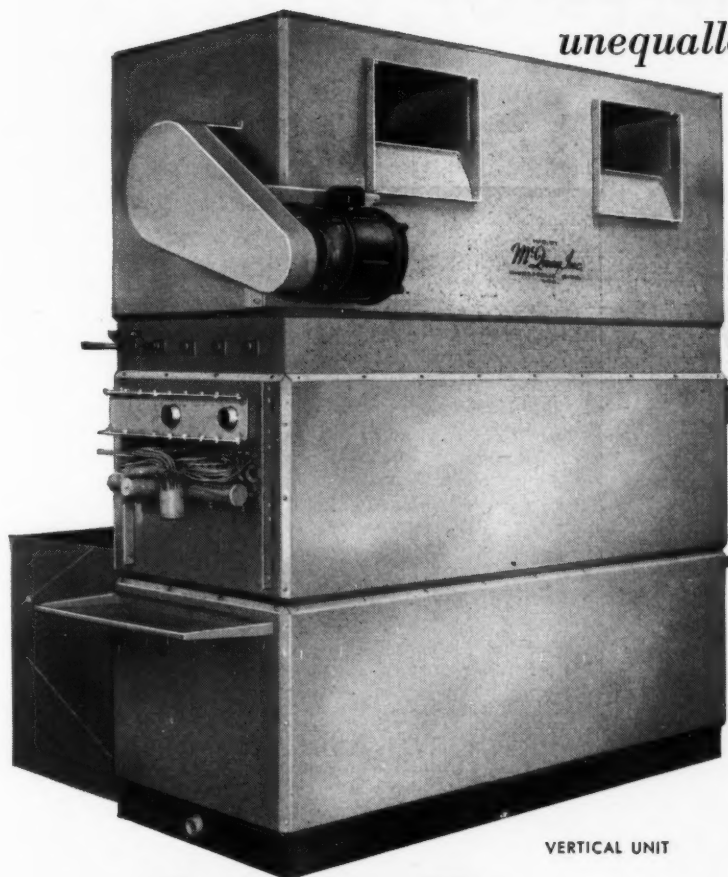
**IN 8 MODELS**  
 up to 65 tons cooling  
 capacity...15,675 Cfm...  
 2,200,000 Btu per hour  
 heating capacity



HORIZONTAL UNIT

# McQuay CENTRAL STATION AIR CONDITIONERS

*...with RIPLE-FIN construction to give you  
 unequalled heat transfer efficiency!*



VERTICAL UNIT

Both the horizontal and vertical Central Station Air Conditioners provide year 'round comfort with cooling and dehumidification, heating and humidification, positive ventilation, and air filtering.

Each of eight models are sectionally built to give complete flexibility of arrangement and all parts are readily accessible to allow for ease of installation and service.

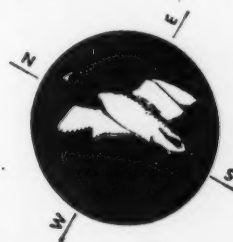
The famous McQuay Ripple-Fin Coils assure unmatched heat transfer efficiency. Also, because of the wide range of Cfm and Btu capacities offered, every normal heating and cooling application can be accurately met with McQuay Central Station Air Conditioners.

Auxiliary features available include: direct expansion, water, and steam coils, mixing box with dampers, "V" type and flat filter sections, humidifiers, and internal face and by-pass damper sections.

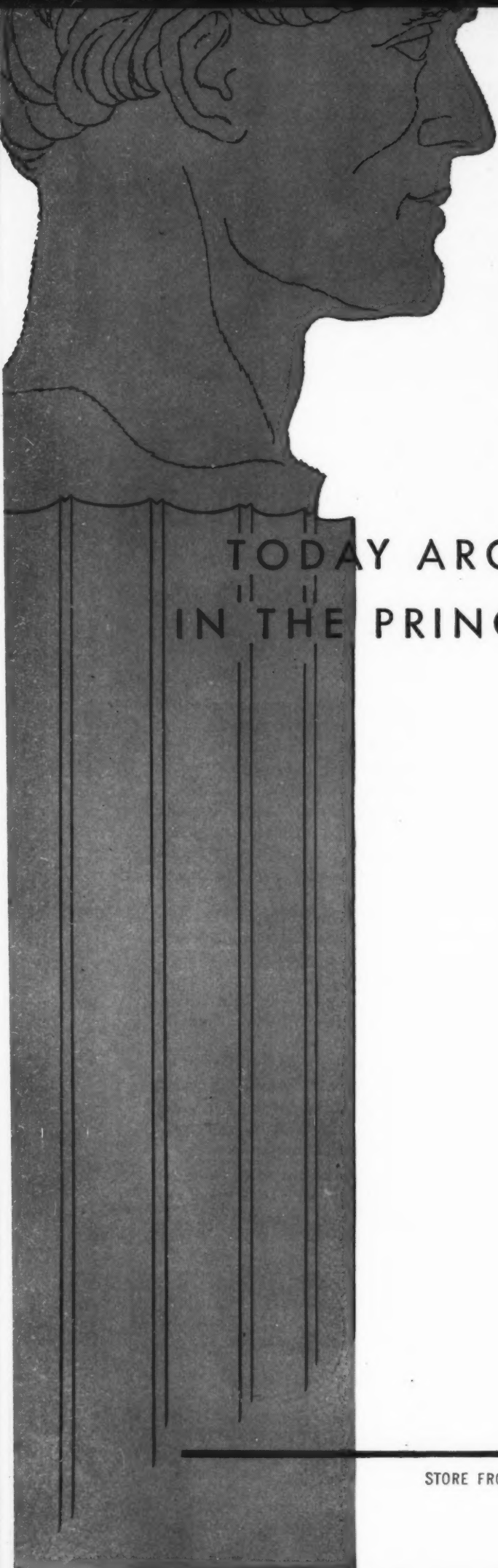
Representatives in principal cities. Write for Bulletin 502. McQuay, Inc., 1605 Broadway St. N. E., Minneapolis 13, Minnesota.

# McQuay INC.

HEATING • REFRIGERATION • AIR CONDITIONING







*Two thousand years ago the  
great Roman architect, Vitruvius,  
wrote: Architecture should  
meet three requirements:  
unity, strength, beauty.*

TODAY ARCHITECTS STILL BELIEVE  
IN THE PRINCIPLES OF VITRUVIUS.....



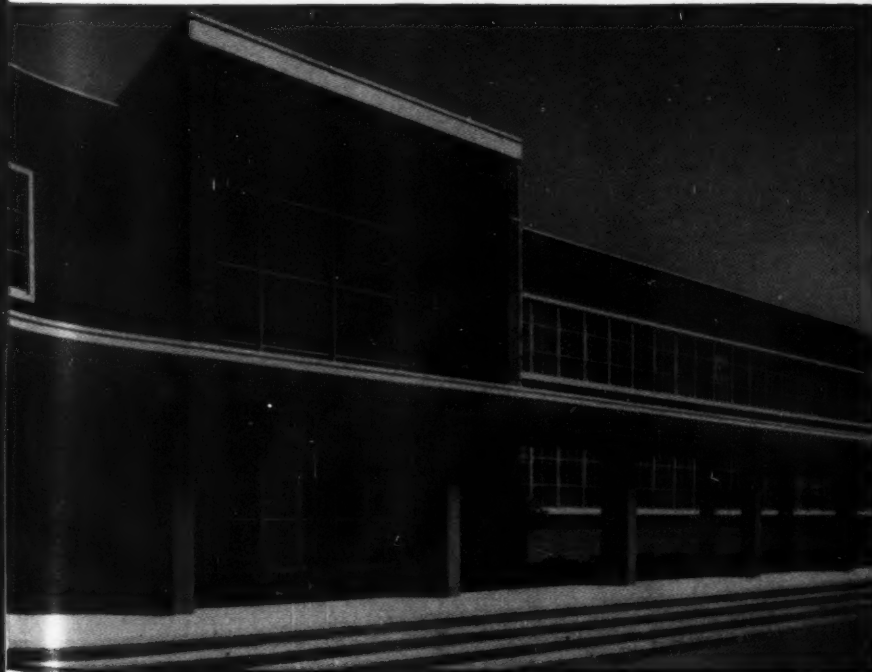


Kawneer Glazing Sash and Entrances:  
Whitaker Guernsey Studio, Chicago, Ill.  
Harper Richards, Architect.

... THE FUNDAMENTAL TRUTHS OF  
ARCHITECTURE are as eternal as the profession  
itself. Modern architects, whether designing a  
commercial building, store, or civic building  
—still honor the principles of unity, strength, and  
beauty. And they find that Kawneer  
architectural metal products have been  
painstakingly engineered and styled to help  
them achieve these goals.



Kawneer Porcelain Enameled Zourite  
used in two colors as a facade covering,  
Kawneer entrances, glazing sash, trim:  
Sears, Roebuck Store, Port Huron, Mich.  
Wyeth & Harmon Architects.



Kawneer mullion construction, entrances, trim:  
Hall of Justice, Richmond Civic Center, Richmond, Cal.  
Elmer J. Freethy, Architect,  
Designers of Center: Milton H. Pflueger  
and Timothy L. Pflueger, Architects.

THE  
**Kawneer**  
COMPANY  
ARCHITECTURAL METAL PRODUCTS

SHOWCASE DOORS • ALL-ALUMINUM FLUSH DOORS • ENTRANCES

CONSULT KAWNEER DETAIL PORTFOLIO, SWEET'S CATALOGS OR WRITE DEPT. AR-100,  
1105 NORTH FRONT STREET, NILES, MICH., OR 930 DWIGHT WAY, BERKELEY, CAL.



# INSTALLED COST CUT WAY DOWN

... with these  
**Door-Frame-Hardware Units!**

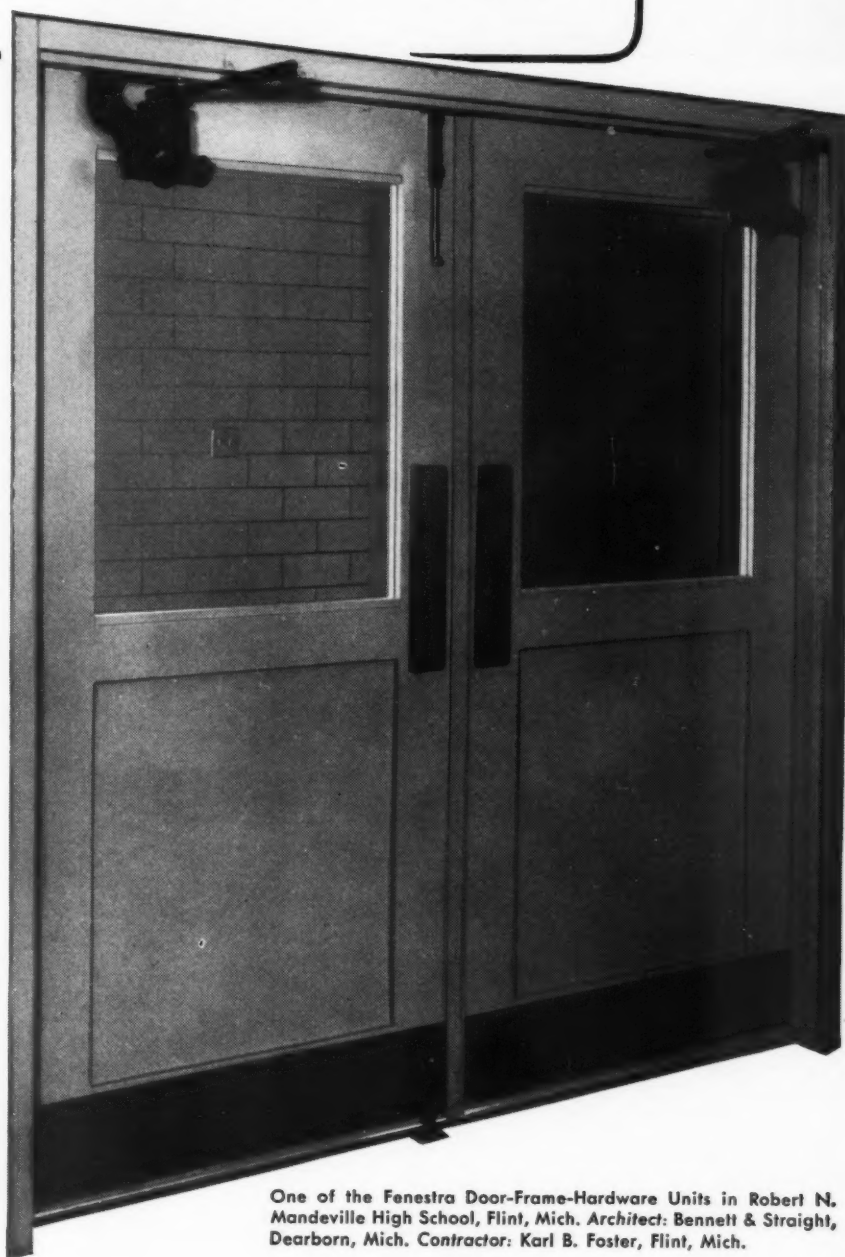
Each beautiful Fenestra\* Hollow Metal Door comes complete with pre-fitted frame and handsome hardware . . . all in one package . . . ready to go in the wall. No cutting, no fitting, no mortising, no prime-painting, no expensive time and labor wasted.

And what doors! Clean, modern lines, velvety finish. They are even insulated for quiet performance. They can't shrink or warp, or swell or splinter. And they can't burn.

These low cost Fenestra Door-Frame-Hardware Units are the result of long years of metal fabricating experience . . . the help of master craftsmen . . . tremendous plant facilities and unique manufacturing methods.

You can get Fenestra Door-Frame-Hardware Units in a wide variety of sizes . . . in three types ingeniously designed for versatile use. Each door may be hinged right or left, swing-in or swing-out.

Get full details and prices. Call your Fenestra Representative—or write to Detroit Steel Products Company, Dept. AR-5, 2252 East Grand Blvd., Detroit 11, Michigan. \*®



One of the Fenestra Door-Frame-Hardware Units in Robert N. Mandeville High School, Flint, Mich. Architect: Bennett & Straight, Dearborn, Mich. Contractor: Karl B. Foster, Flint, Mich.

*Fenestra* HOLLOW METAL DOOR • FRAME • HARDWARE UNITS  
save building time, labor, materials and money

# How to ventilate a shopping center

...on the roof...

of every store in the shopping center!

## Positive action, quiet Power Roof Ventilators

Through an inconspicuous grille mounted in the ceiling, each store in this Cleveland shopping center is provided with a 5-minute air change. Larger stores have two, smaller stores one ILG Power Roof Ventilator. Each ventilator is composed of an ILG Self-Cooled Motor Propeller Fan, with an Automatic Shutter, in a weatherproofed, steel Penthouse. Units are positive in action, assuring all-weather ventilation the year 'round, regardless of changes in temperature or wind direction and velocity. Easy to install, simple to service and maintain, the ILG units are backed by a "One-Name-Plate" Guarantee, covering fan, motor, shutter, and penthouse as a unit. Get complete data—phone nearby Branch Office (consult classified directory) or send coupon today.



## VENTILATION

*Free!* Engineering data bulletin 149-12 contains all essential data—sizes, capacities, dimensions, ratings. Send coupon now.

☐ Send free bulletin 149-12

Firm Name \_\_\_\_\_

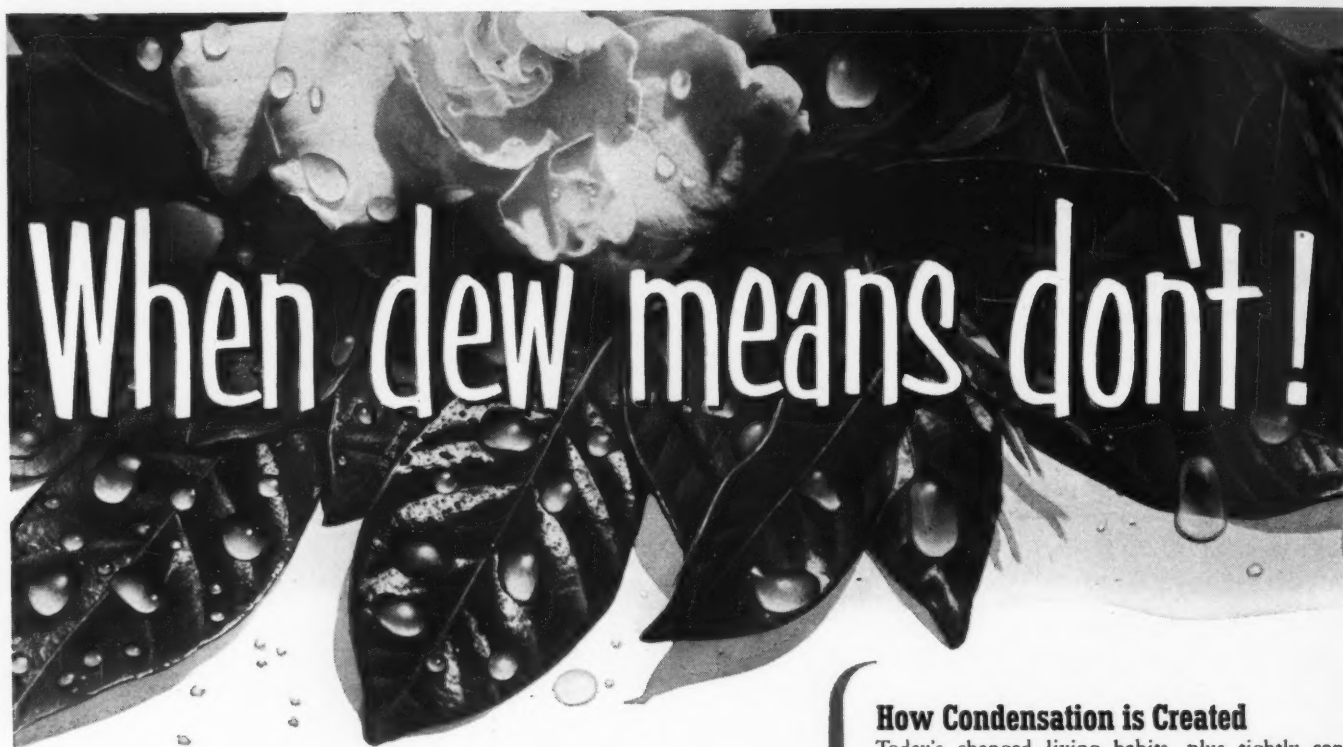
Individual \_\_\_\_\_

Title \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_



# When dew means don't!

DEW has been lauded in lyrical poetry—artists have painted its shimmering beauty. Yes, in some places dew looks good.

But not on windows—here it is a *warning*.

Here it means DON'T—don't blame windows and don't delay getting at the real cause, for when the "dew-point" is reached water is at work dangerously . . . staining walls, attacking paint, and rotting structural timbers.

## Do Windows Cause Condensation? **NO!**



Ceco Aluminum Double-Hung Windows

Ceco Steel Casements

Ceco Picture Windows

RIGHT OFF—consider this—windows do not *cause* condensation—they merely *reflect* the first effect of it. Condensation is caused by an overabundance of moisture vapor in the air—when the saturation point meets the proper temperature it becomes water.

Send for booklet on how to control condensation.



### CECO STEEL PRODUCTS CORPORATION

General Offices: 5601 West 26th Street • Chicago 50, Illinois  
Offices, warehouses and fabricating plants in principal cities



*In construction products* **CECO ENGINEERING** *makes the big difference*

### How Condensation is Created

Today's changed living habits, plus tightly constructed, compact homes have much to do with causing condensation. Here are some sources.



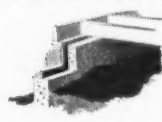
Washing left-over dishes and cooking can release as much as 5.76 pounds of moisture.



Washing and drying clothes at home can release as much as 30.73 pounds of water.



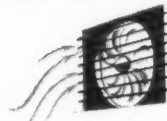
Two shower baths can add a pound of moisture to the air, while two tub baths can build up 0.24 pounds.



External vapor generated by uncovered earth in crawl spaces may be greater than all other sources combined.

### How to Control Condensation

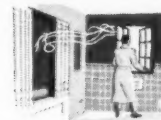
The home-owner can do much toward decreasing condensation. Here are four methods of control.



Exhaust fans control moisture in kitchens in addition to eliminating cooking odors.



Windows in the laundry room should be opened slightly when laundering.



Moisture can be controlled in the bathroom by opening windows and keeping the door shut after bathing.



Ventilation of crawl space and covering earth with roofing felt is another condensation control method.



**Save with SAFER...Surer  
AB BREAKERS**



ONE OF 2500 WESTINGHOUSE  
CIRCUIT BREAKERS INSTALLED  
IN THE GULF BLDG., PITTSBURGH

## **18 YEARS OF CONTINUOUS SERVICE without failure, replacement or maintenance**

2500 thermal-type branch circuit breakers, installed and then forgotten, in the Gulf Building, Pittsburgh, Pa., have written an unparalleled story of circuit protection. B. E. Moore, Building Superintendent, reports that after 18 years of service without failure, replacement or maintenance, these breakers were recently checked in random tests and were found to be "as good as new". On both overload and short circuit protection, they performed precisely to their original specifications. And on inspection, mechanical parts and contacts were found to be in "excellent condition".

What better proof can we give you that when you install Westinghouse Circuit Breakers you install the

finest in dependable, grief-free equipment. They are miserly with maintenance time, too—when trouble is cleared from the circuit, a flip of the breaker handle restores power instantly. No running after fuses, nothing to replace, nothing extra to buy.

For assistance on any circuit protection problem, contact your nearest Westinghouse office, or write for Bulletin No. DB-29-060, Westinghouse Electric Corporation, Box 868, Pittsburgh 30, Pa. J-30049



YOU CAN BE SURE... IF IT'S

# Westinghouse

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## AB CIRCUIT BREAKERS

THE COMPLETE LINE



# Rotary Oildraulic

## the modern elevator for

### NORTHWESTERN MUTUAL FIRE ASS'N

Los Angeles, Calif.

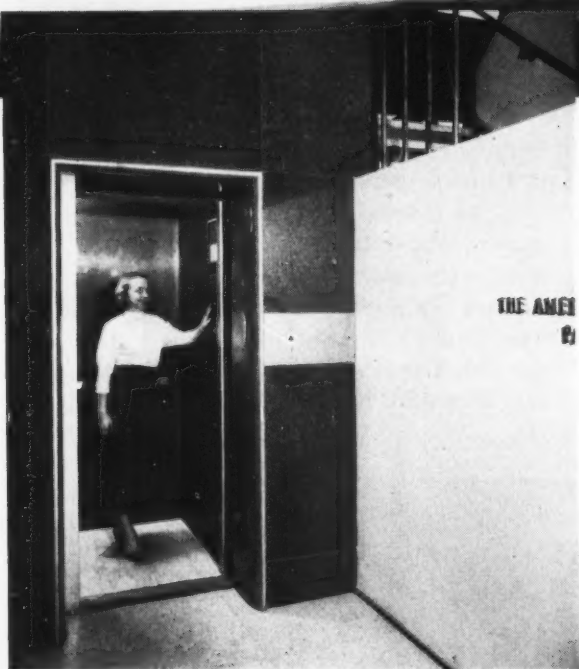
Architect: Richard J. Neutra

Contractors: C. W. Driver, Inc.

Rotary Oildraulic Elevator (passenger)

installed by Elevator Maintenance Co., Ltd.

Photos by Julius Shulman



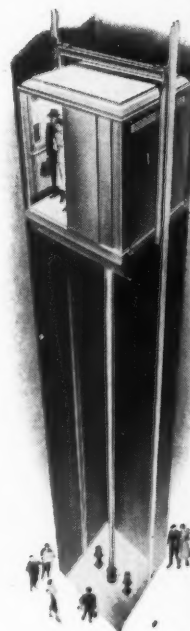
#### Oildraulic Passenger Elevators

The velvet-smooth fluid operation of the Oildraulic system is ideal for passenger elevator service. You can depend on gentle starts, cushioned stops and accurate landings. Any desired types of cabs, doors and controls can be supplied.

#### No penthouse or heavy supporting sidewalls needed

The Rotary Oildraulic Elevator is moved and controlled by oil under pressure, the most powerful and practical of all methods of lifting heavy loads. The elevator car and its load are supported by the hydraulic system—not by the building structure. This makes possible a substantial lightening of the shaftway structure, with savings in construction costs. There's no need for heavy, load-bearing sidewalls, supporting columns and footings ordinarily required to carry the overhead machinery, the car and the load.

No penthouse is used with an Oildraulic Elevator and, in many cases, a machine room is unnecessary. Rotary's compact power unit can be located on any landing, on any side of the hatchway—anywhere within 50 feet of the elevator. This saves valuable space.



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# for modern 2, 3 and 4-story buildings

## CITIES SERVICE OIL COMPANY

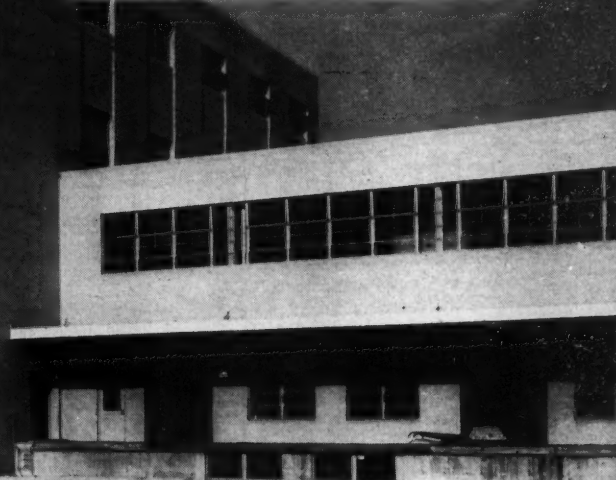
Chicago, Ill.

Engineers and Contractors:

Sumner S. Sollitt Construction Co.

Rotary Oilraulic Elevator (freight)  
installed by Gallaher & Speck, Inc.

Photos by Torkel Korling



### Oilraulic Freight Elevators

Oilraulic operation makes it practical and economical to design Rotary Elevators to carry loads up to 100,000 lbs. Oilraulic Freight Elevator cars have extra-rugged construction essential for rough, tough freight service and power truck loading.

### Rota-Flow power system gives smooth, quiet, low-cost service

A revolutionary oil hydraulic power system moves Rotary Oilraulic Elevators on a smooth, continuous column of oil. Combined with the efficient Rota-Flow power unit to give perfect operation is the Oilraulic Controller. This engineering marvel handles the functions of seven separate control valves, simplifies adjustments and maintenance.

Smooth starts and stops are a feature of these modern elevators. Oilraulic automatic floor leveling positions the car to each landing with exactness— $\frac{1}{4}$ " accuracy is guaranteed!

Over 65,000 Rotary Oilraulic elevators and lifts are serving leading companies from coast to coast. Our Engineering Department will be glad to assist you. Write for catalog and complete architectural data.

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**Rotary®**

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# UNIQUE INSTALLATIONS of standard Frigidaire equipment

solve air conditioning problems with maximum economy

Economical air conditioning of problem areas, whether in homes, offices or small plants, can be solved satisfactorily in many instances with "unconventional" installations of Frigidaire Room Air Conditioners.

Discarding the erroneous impression that these units can only be used effectively in double-hung windows, many architects and builders are discovering many different ways of adapting them to meet a variety of air conditioning problems. And, in many commercial installations, they've saved customers considerable money by eliminating duct-work and plumbing.

The installations shown on this page illustrate the use of a certain amount of ingenuity and imagination.

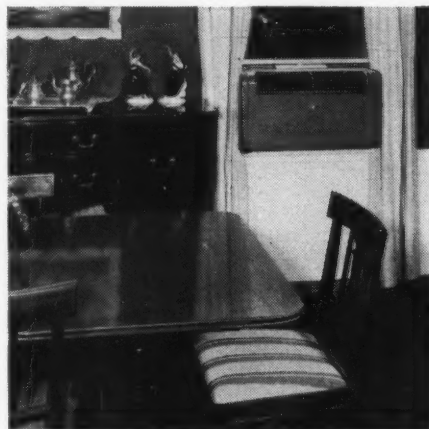
**Home**—Here the unit is installed in a steel casement window. In this case the ventilators (swinging window sections) and the center mullion have been removed, a new member has been bolted across the frame, and the space above the unit filled in with a fixed glass panel. Since the unit itself provides adequate ventilation, there is no disadvantage to the fixed glass arrangement.

**Motel**—Where no window is available, the unit may be installed in a special opening provided in an outside wall. This permits choice of optimum location, such as near the ceiling, which saves space and gives ideal air distribution.

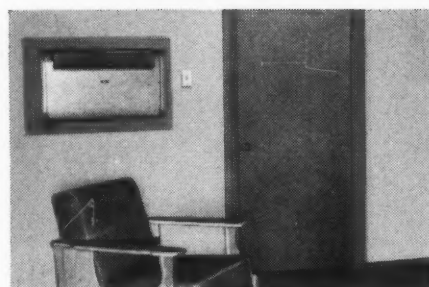
**Factory**—Where neither window or outside wall location is feasible, units can be installed above or below the conditioned area and connected to it by supply and return air ducts, as shown in this unique factory installation.

**Offices**—A wide variety of unusual installations is possible in offices. One such, shown below, has the entire window removed and the space around the unit filled in with attractive glass blocks. The other illustrates a novel use of two units installed side by side in a single window to provide the desired capacity.

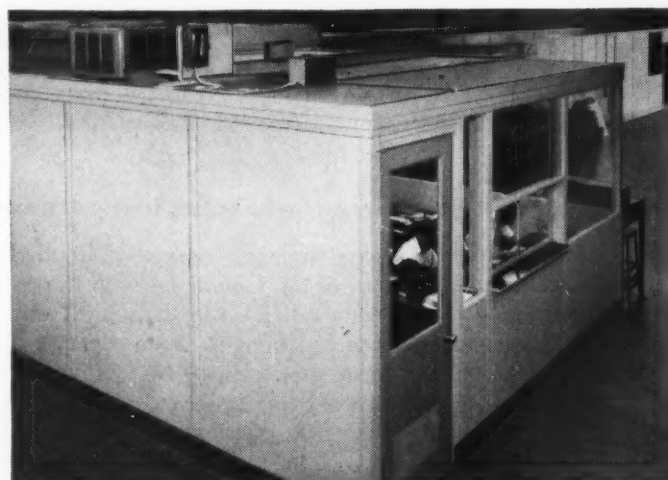
For expert help in planning installations of this kind—or in solving any air conditioning or refrigeration problem—call the Frigidaire Dealer, Distributor or Factory Branch that serves your area. Look for the name in the Yellow Pages of your phone book. See Frigidaire catalogs in Sweet's Files or write Frigidaire Division of General Motors, Dayton 1, Ohio. In Canada, Leaside (Toronto 17), Ontario.



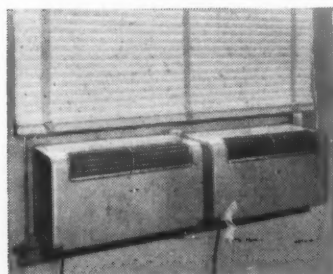
**Casement window** problem solved with unique use of fixed glass panel.



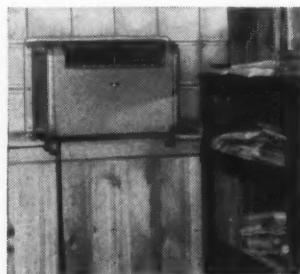
**Wall installation** points up flexibility of locating these easily installed units.



**Overhead** placement overcomes one of the more unusual problems of air conditioning an office within a factory area.



**Battery** of window-type units gives abundant cooling—saves space.



**Entire window** removed and replaced with modern glass bricks.

## FRIGIDAIRE Appliances— Refrigeration and Air Conditioning Products

Refrigerators • Electric Ranges • Home Laundry Equipment  
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*Frigidaire reserves the right to change specifications, or discontinue models, without notice*

# ORIGINALITY OF IDEA

THIS CONCEALED LAVATORY UNIT is a good example of Hall-Mack quality expressed through originality of idea.

Like the good servant it is, this practical Hall-Mack accessory provides soap, tumbler or toothbrush at fingertip command—yet remains tastefully in the background when not in service. Only the shining chromium plated panel is visible when the unit is closed.

Here's a new and better answer to a standard bathroom accessory need. It demonstrates how Hall-Mack quality begins with a better basic idea and is carried out in every detail of construction and finish. It's another reason why Hall-Mack is recognized as the only answer in Quality Bathroom Accessories!

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answer to  
quality bathroom  
accessories*



YOU BUILD A BATHROOM for a lifetime of use. Make sure you build with Hall-Mack's lasting quality and style. Within four popular lines—Crystalcrome, Coronado, Tempo and China-Vogue—you can select Hall-Mack accessories for every bathroom style and budget!

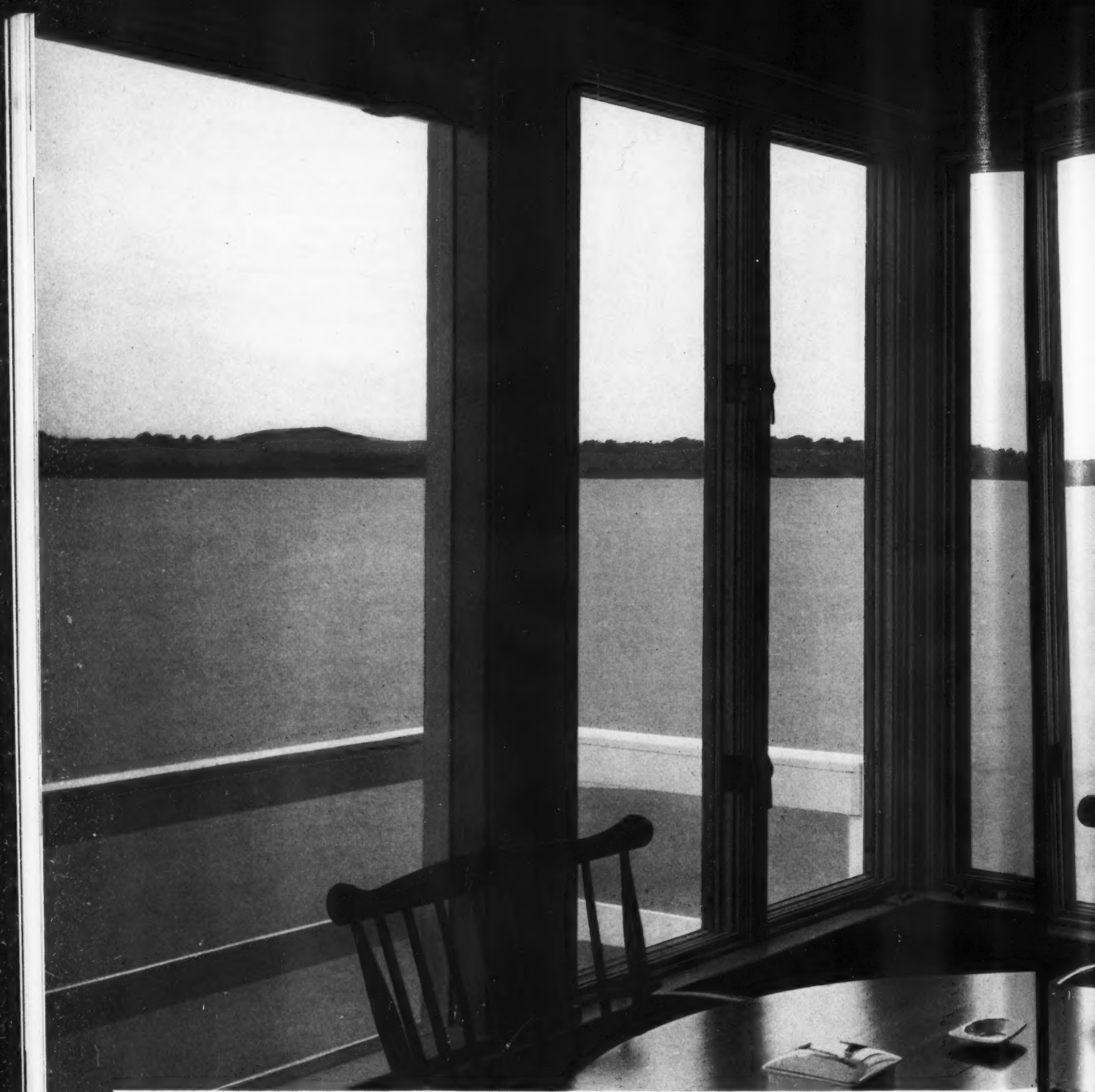
### HALL-MACK COMPANY

1344 W. Washington Blvd., Los Angeles 7, California

7455 Exchange Ave., Chicago 49, Illinois







*Home at Lake Skaneateles, N.Y., Hawley McAfee, Architect*

**PLENTY OF FRESH AIR  
THROUGH GLASS WALLS...**

**ANDERSEN**  
*Windowalls\**



KEY TO COMFORT in the modern glass wall is usually the operating windows. Andersen WINDOWALLS, like these Casement Window Units, bring plenty of fresh air into the picture. Yet they also serve as an efficient wall to moisture, dust and wintry cold. Their

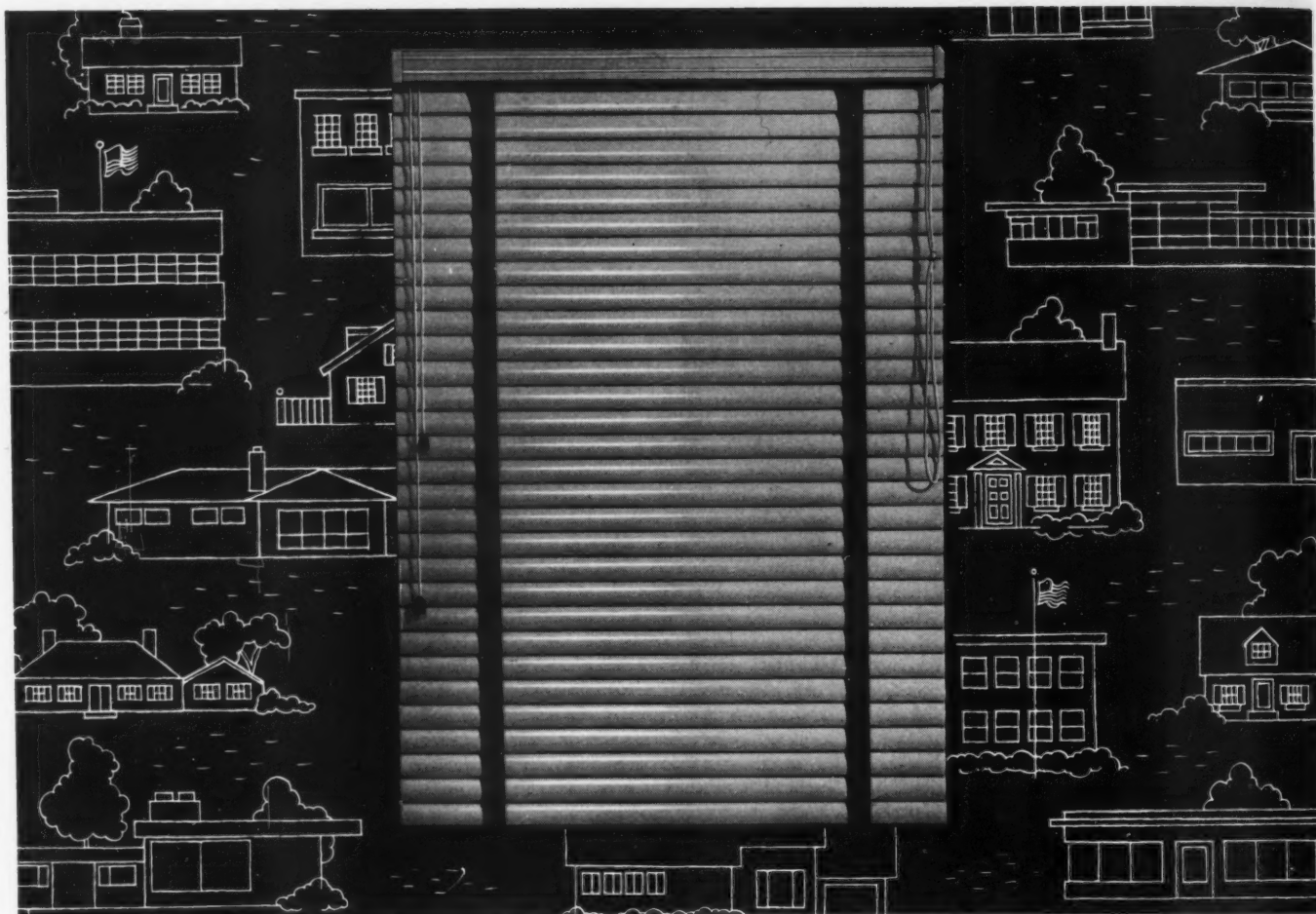
wood construction adds warmth and beauty both as window and as wall.

Andersen Casements are now available in a new series of sizes, with sash  $4\frac{1}{2}$ " wider than the units illustrated above. \*TRADEMARK OF ANDERSEN CORPORATION

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FAMOUS FOR COMPLETE WOOD WINDOW UNITS

Write for Detail Catalog or Tracing File of Installation Details or see Sweet's files for specification data. WINDOWALLS sold by millwork dealers.





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**stays new, beautiful... clean!**

**new decorating possibilities!**

**uniform quality... recognized quality!**

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- cords are wipe-clean plastic too. Retain their tensile strength, wear longer without fraying or breaking.
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- sturdy top and rigid bottom bar also mar-proof finished.
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- plastic tassels are noiseless, unbreakable.
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- National advertising has convinced your customers of Flexalum quality. Let Flexalum help convince them of the quality of your building!

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**CUTS COST OF FLOOR UPKEEP  
INCREASES EFFICIENCY OF WORKERS**

**TOUGH, DURABLE  
HARDWOODS**  
(Hickory and Pecan)

**EXTRA THICK**  
(33/32 INCH)  
(Tongued and grooved)

**TOXIK\* PRESERVED**  
(For durability and  
protection)

**INSTALLED IN  
MASTIC OVER  
CONCRETE**

## A Bruce Dura-Wood Block Floor will give long, economical service

### Withstands roughest wear

Dura-Wood Blocks are made of tough, long-wearing Hickory and Pecan . . . close grained, heavy hardwoods that resist wear and abrasion. A floor of this type will last indefinitely. It will not powder, dust, crack or wear away like many hard-surfaced floors.

### Less fatiguing

Workers find this hardwood floor far more comfortable underfoot—much less fatiguing than unyielding floors of concrete or other hard materials. No more cold feet . . . less lost time from colds.

### No powdering

Because a Dura-Wood Floor won't powder or dust, this eliminates a source of discomfort and irritation to workers. No

abrasive dust to get into machines or machined parts. Floor maintenance is simple. Usually dry sweeping is all that is required. Blocks damaged by extreme service are easily replaced without interruption of work.

### Less damage to equipment

Plant engineers report far less damage to tools and machined parts when accidentally dropped on wood floors than on hard surfaced floors. There's less wear and tear on power trucks and other rolling equipment, too.

### Simple installation

Dura-Wood Blocks are laid in mastic over concrete slab. Where service is the principal consideration, it is unnecessary to sand or finish the floor as the *Toxik* treatment preserves and protects the surface.

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**E. L. BRUCE CO., MEMPHIS 1, TENN.**  
World's largest maker of hardwood floors

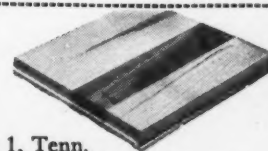
**BRUCE** ***Dura-Wood***  
**BLOCK FLOORS**



*Bruce also makes 33/32" Dura-Wood Strip Flooring  
See Sweet's File for Technical Data*

### MAIL FOR LITERATURE

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Address

City and State



*Bethlehem Longspan Joists in S. K. Wellman factory, Bedford, Ohio. Architect: Charles Bacon Rowley and Associates, Inc., Cleveland. Contractor: A. M. Hingley Company, Cleveland.*

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Used as roof supports in any light-occupancy building—factory, warehouse, garage, store—Bethlehem Longspan Steel Joists can help you save valuable floor space for work and storage.

Longspans enable you to plan unobstructed floor areas with spans up to 64 ft or more. Machinery, fixtures, stockpiles and partitions can be arranged with less interference from columns.

Another advantage: Longspans used at close spacings reduce the need for pilasters which often interfere with wall design. Installed as either roof or floor supports, these joists save construction time because pipes, conduits and ducts can be run through the open webs.

Longspan Joists reach the job completely fabricated and clearly marked, ready for placing. They come in two types: underslung con-

struction with top-bearing ends and bottom-bearing construction with square ends.

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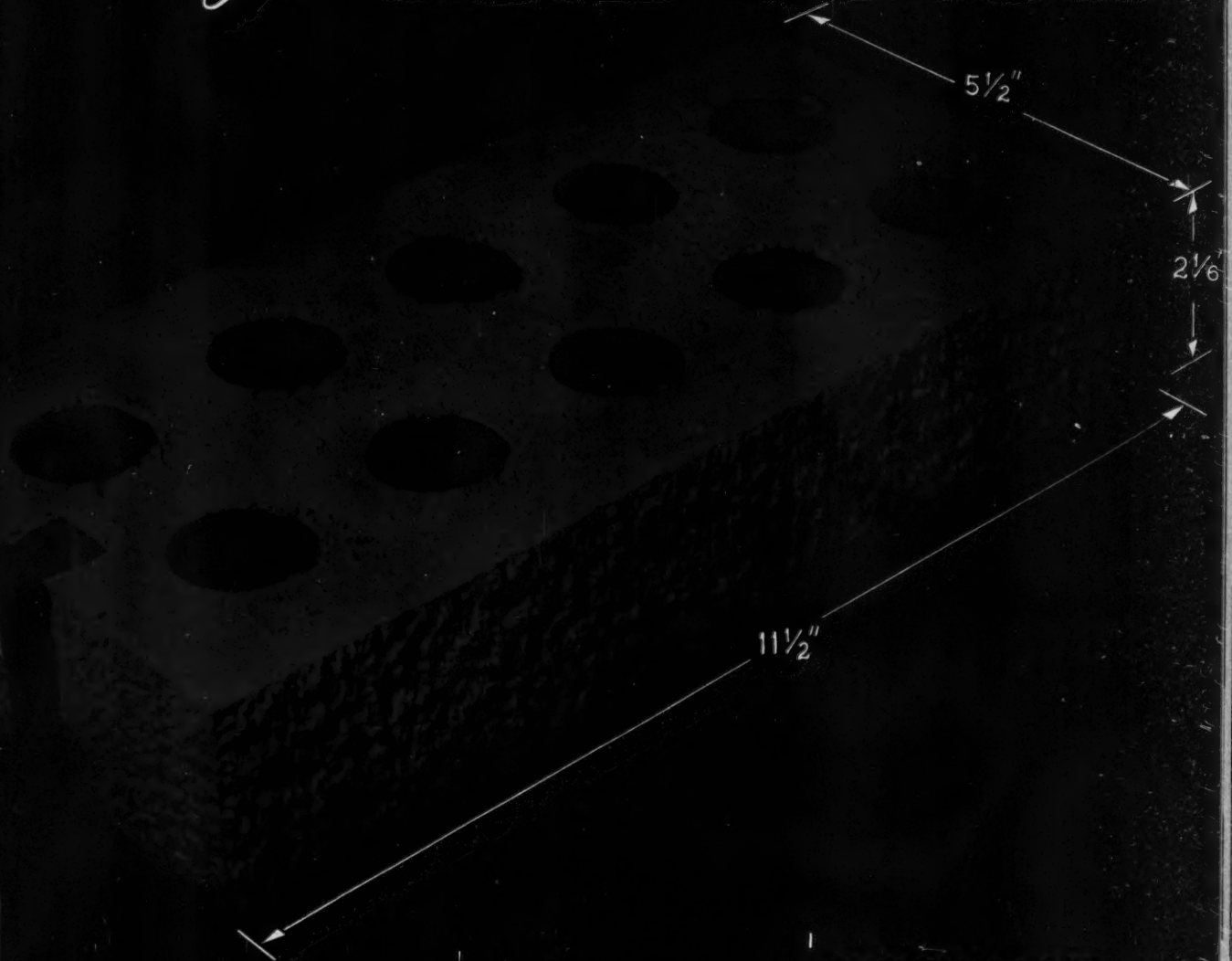
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*Now...* **BUILD SOLID BRICK HOMES OF PREMIUM APPEARANCE AT A COST COMPETITIVE WITH FRAME**

**the "SCR brick" is a  
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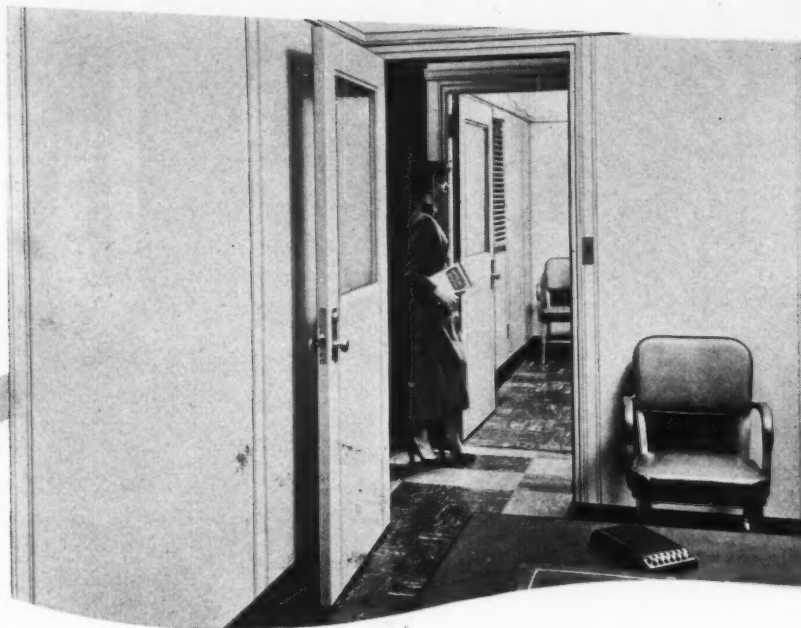
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**Korweld**—the non-metallic panel construction which combines the best features of all types of interior partitions—is an exclusive Hauserman development. Ask your Hauserman Representative for facts about this revolutionary new product.  
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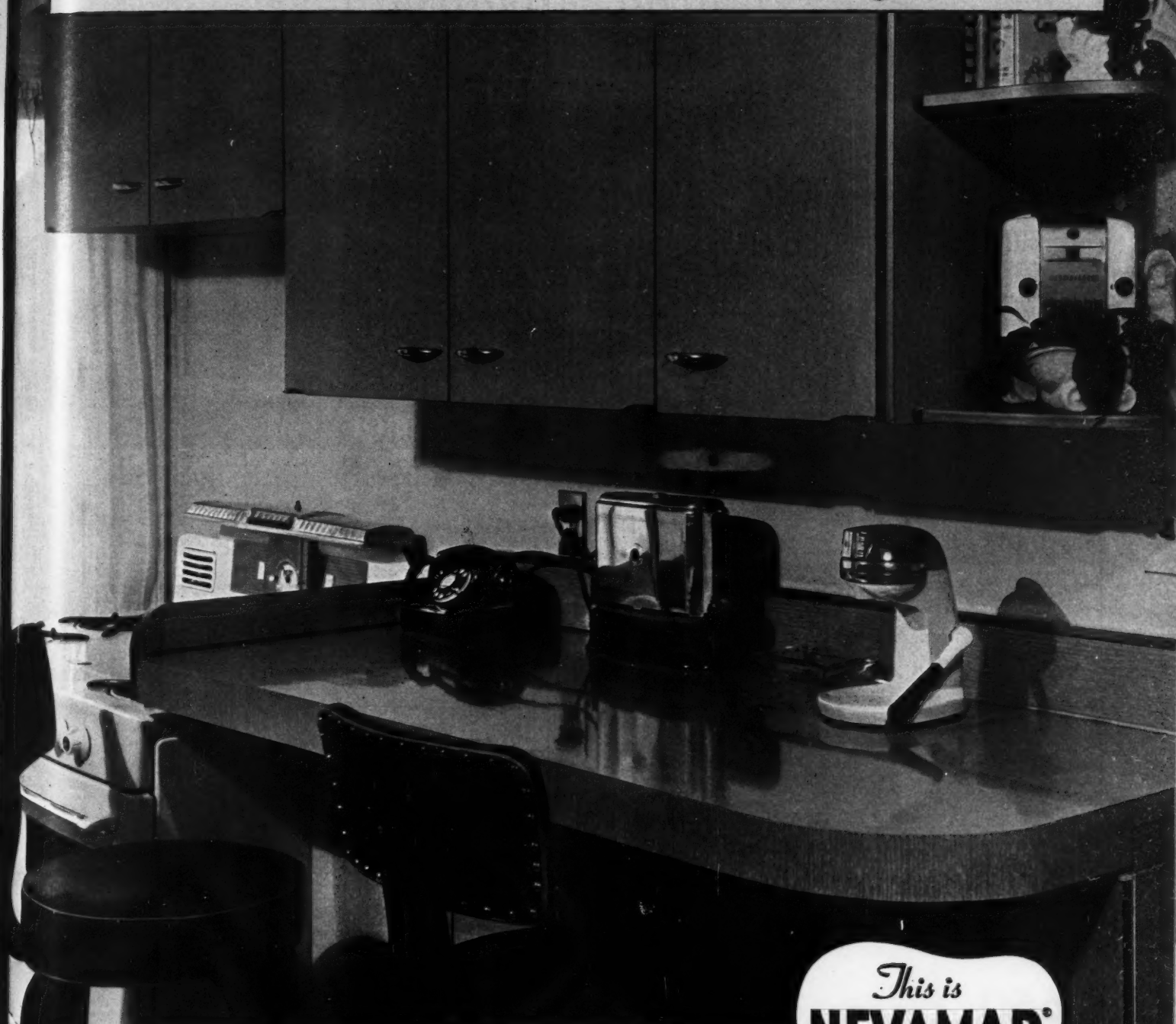
Interiors, thousands of American businesses—commercial, industrial and institutional—are experiencing this same freedom from limitation . . . *permanent livability* despite changing floor space requirements.

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*Building or Waiting?*

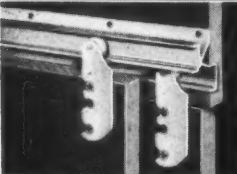
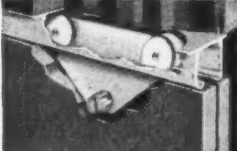
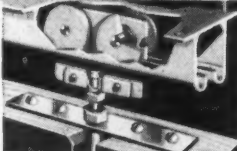
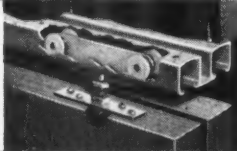
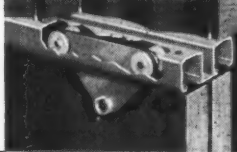

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*Available Now!*



Kennatrack Sliding Door Hardware Selection Chart				
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<b>250</b>		3/4" to 1 1/8" by-passing doors	Cabinets, fixtures and light wardrobes.	2-5/16"
<b>300</b>		3/4" to 1 3/8" doors	By-passing, converging, open pocket and closed pocket doors.	1"
<b>400</b>		1 3/8"	Closed pocket doors. Finest quality track available.	2-11/16"
<b>600</b>		1 3/8" by-passing doors	Double track for by-passing wardrobe doors. Adjustable hanger.	2-1/16"
<b>650</b>		1 3/8" by-passing doors	Double track for by-passing wardrobe doors. 1" head room.	1"
<b>800</b>		1 3/8" doors	Prefabricated pocket metal frame. Warp proof.	2-11/16"

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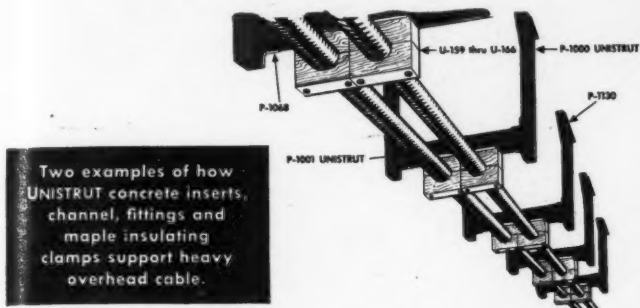


# typical UNISTRUT® framing applications

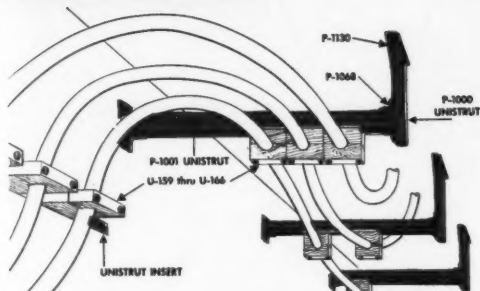
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ALL KINDS OF ELECTRICAL EQUIPMENT

No drilling, no welding, no special tools or equipment  
—versatile UNISTRUT framing permits adjustments,  
changes or additions to be made at any time.

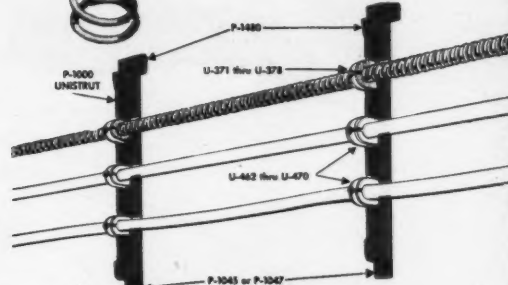
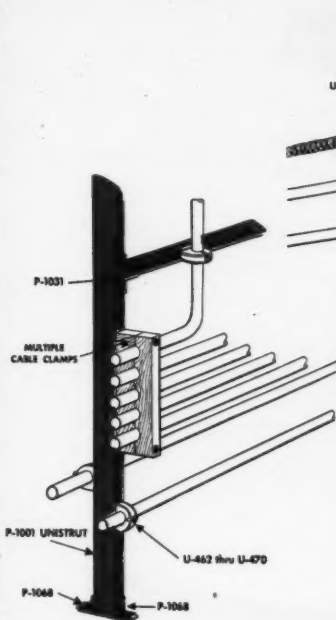
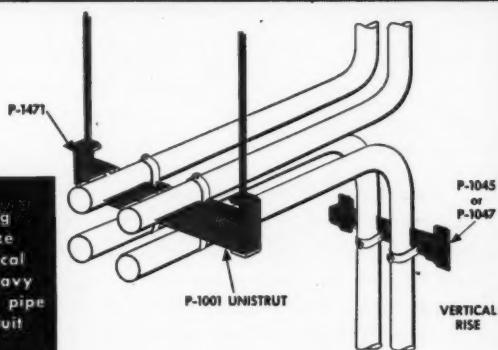
The UNISTRUT method  
conserves steel, reduces  
manpower hours, cuts  
overall costs.



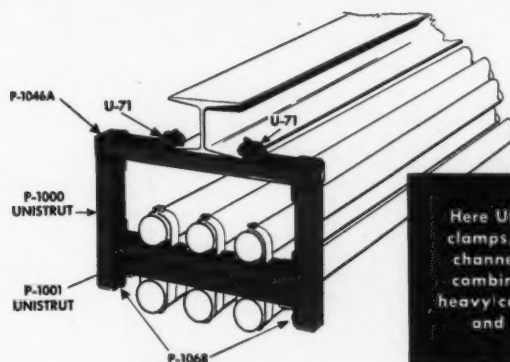
Two examples of how  
UNISTRUT concrete inserts,  
channel, fittings and  
maple insulating  
clamps support heavy  
overhead cable.



UNISTRUT framing  
assembly (trapeze  
hanging and vertical  
rise) supporting heavy  
conduit. Note how pipe  
clamps hold conduit  
firmly.



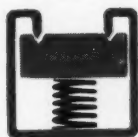
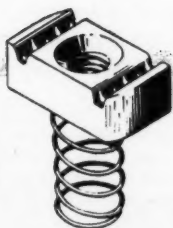
Here maple and porcelain  
cable clamps insulate  
conduit in UNISTRUT  
column-mounted assembly  
(at left) and cable in  
horizontal wall mounting  
(above).



Here UNISTRUT beam  
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channel and fittings  
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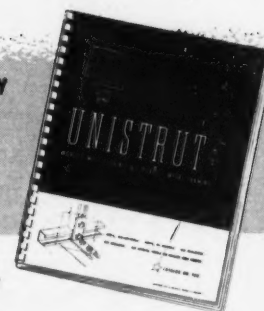
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## Steam Capacity Data

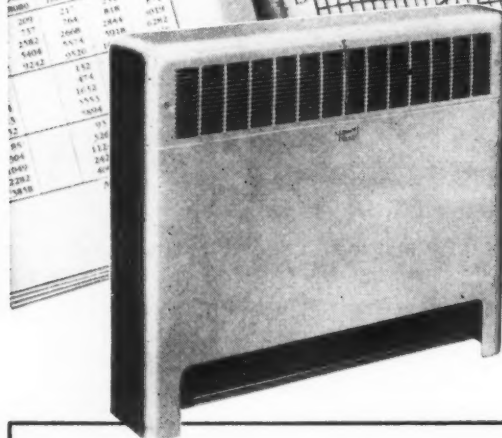
64 Ft. 200 (One Sq. Ft. 200 Equals 200 BTU Per Hr.)  
210° F. Steam — 45° F. Entering Air

\*"The ratings of these convectors have been determined in conformance with Commercial Standard CS140-47, as developed cooperatively by the trade and the National Bureau of Standards, U.S. Department of Commerce, and the said ratings have been approved by the Convector Rating Committee."

The ratings of these convectors have been determined in accordance with Commercial Standard CS140-47, as developed cooperatively by the trade and the National Bureau of Standards, U.S. Department of Commerce, and the said ratings have been approved by the Convector Rating Committee.

In accordance with the provisions of Commercial Standard CS140-47, the percentages listed below in Table 12 have been added in the steam and hot water capacities for heating effect.

Table 12	16	20	24	28	32
Convector Height (feet)					
Types "T", "R", "W"	4	2.7	0.3		
Type "S"					



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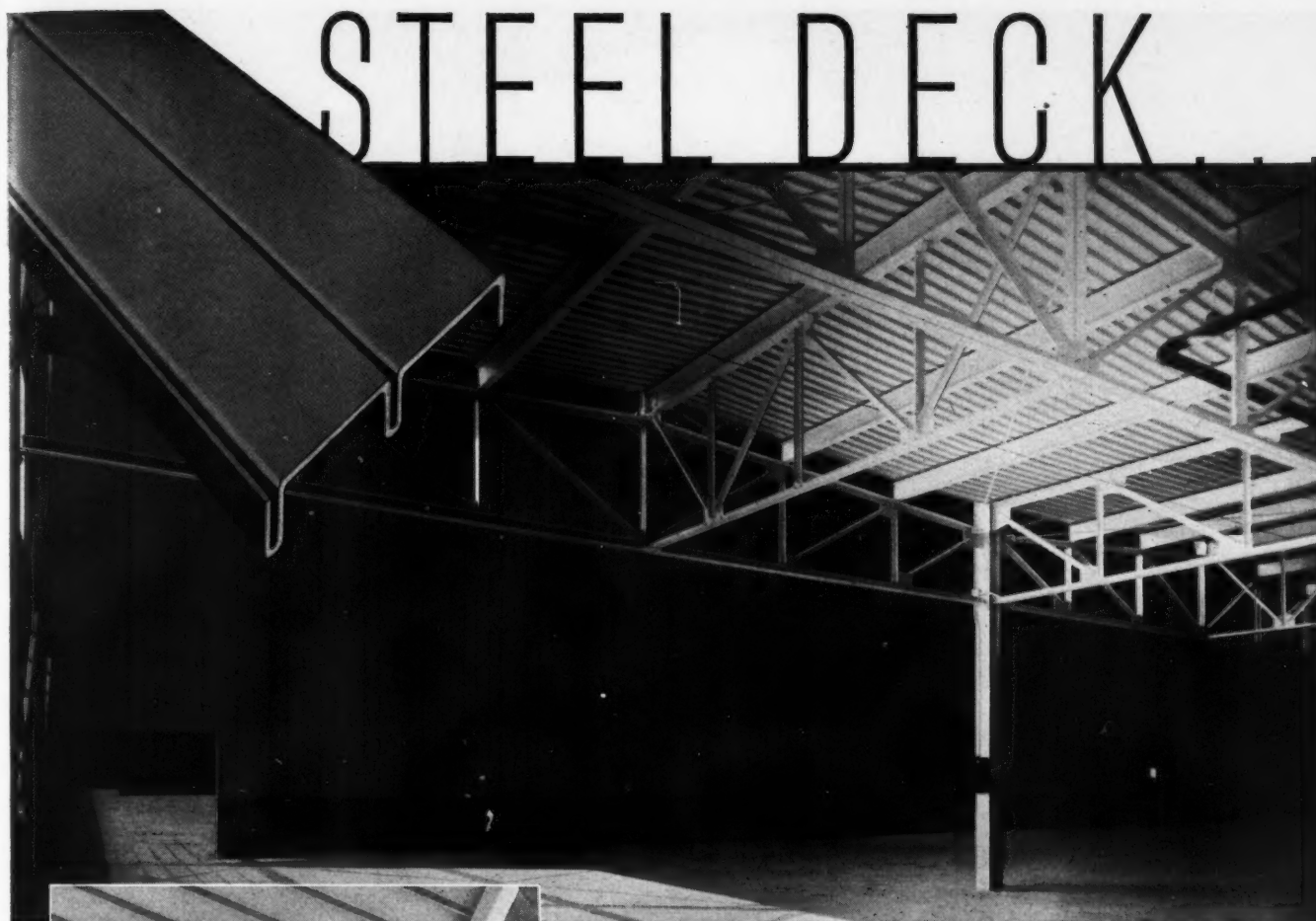
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If you think all convectors are alike, you'll find Catalogs No. 4049 and 4150 revealing. They give full details, including illustrated features of Young Convectors, approved ratings, dimension data, etc. Be sure to have a copy in your catalog file. It will be sent you without obligation.





# STEEL DECK

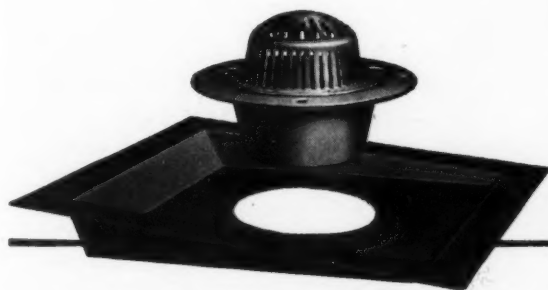


Mahon Steel Deck and Mahon Insulated Metal Wall Panels employed in New Building for L. A. Young Spring & Wire Company, Detroit, Mich. Christian W. Brant & Associates, Archts.; Barton-Malow Co., Gen. Contr.



## BUILT-UP SADDLES ELIMINATED

Built-up saddles are eliminated in Steel Deck Roofs. Purlins can be set to create valleys at sump locations in the drainage area. Steel Deck can be warped to conform. No additional deck plates are required—no cutting or fitting necessary.



## SUMP RECESSES and SUMPS

Mahon Roof Sump Recesses for use with Mahon Steel Deck can be furnished to fit any roof pitch. Mahon Cast Iron Sumps can also be furnished for 4", 5", and 6" conductors.

## Selected for Building with Insulated Metal Curtain Walls and Interior Dividing Walls!

The view above shows a Mahon Steel Deck Roof together with Mahon "Flush Type" Insulated Metal Wall Panels employed in the construction of interior dividing walls. Mahon "Fluted Type" Insulated Metal Wall Panels were employed for exterior curtain walls in this same building. No matter how you compare the different types of roof construction and materials, you will find that Steel Deck is the most economical, permanent, firesafe roof material available today. It's light weight, and the fact that it can be insulated to produce the specific thermal properties required in any given locality, reduce total roof cost to an absolute minimum. Mahon Steel Deck is available in Galvanized or Enamel Coated Steel. In the enamel coating process, the metal is chemically cleaned and phosphated to provide paint bond, and the synthetic enamel is baked on at 350° F. prior to roll-forming. This is just one of the extra-value features of Mahon Steel Deck. See Sweet's Files for complete information, or write for Catalogs B-52-A and B.

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Manufacturers of Steel Deck for Roofs, Partitions, Ceilings and Permanent Concrete Floor Forms; Insulated Metal Walls of Aluminum, Stainless or Galvanized Steel; Rolling Steel Doors, Grilles, and Underwriters' Labeled Rolling Steel Doors and Fire Shutters.

# MAHON



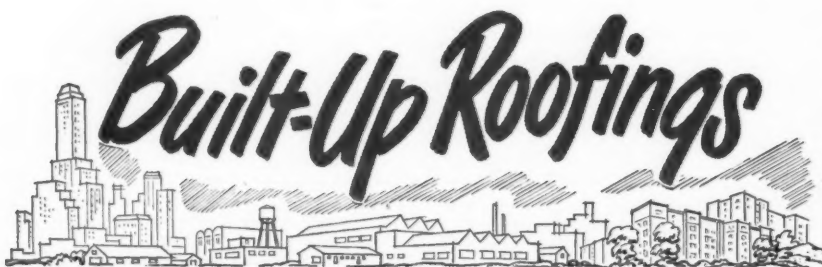
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DeWITT & SWANK, DALLAS

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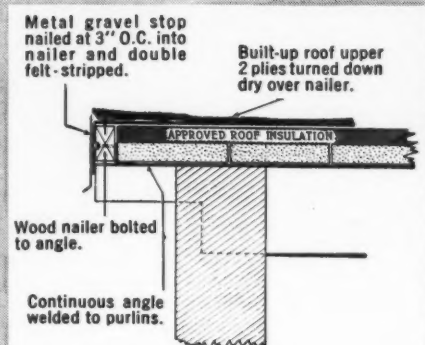
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ARCHITECTURAL RECORD'S  
BUILDING TYPES STUDY NO. 186 **H O U S E S**

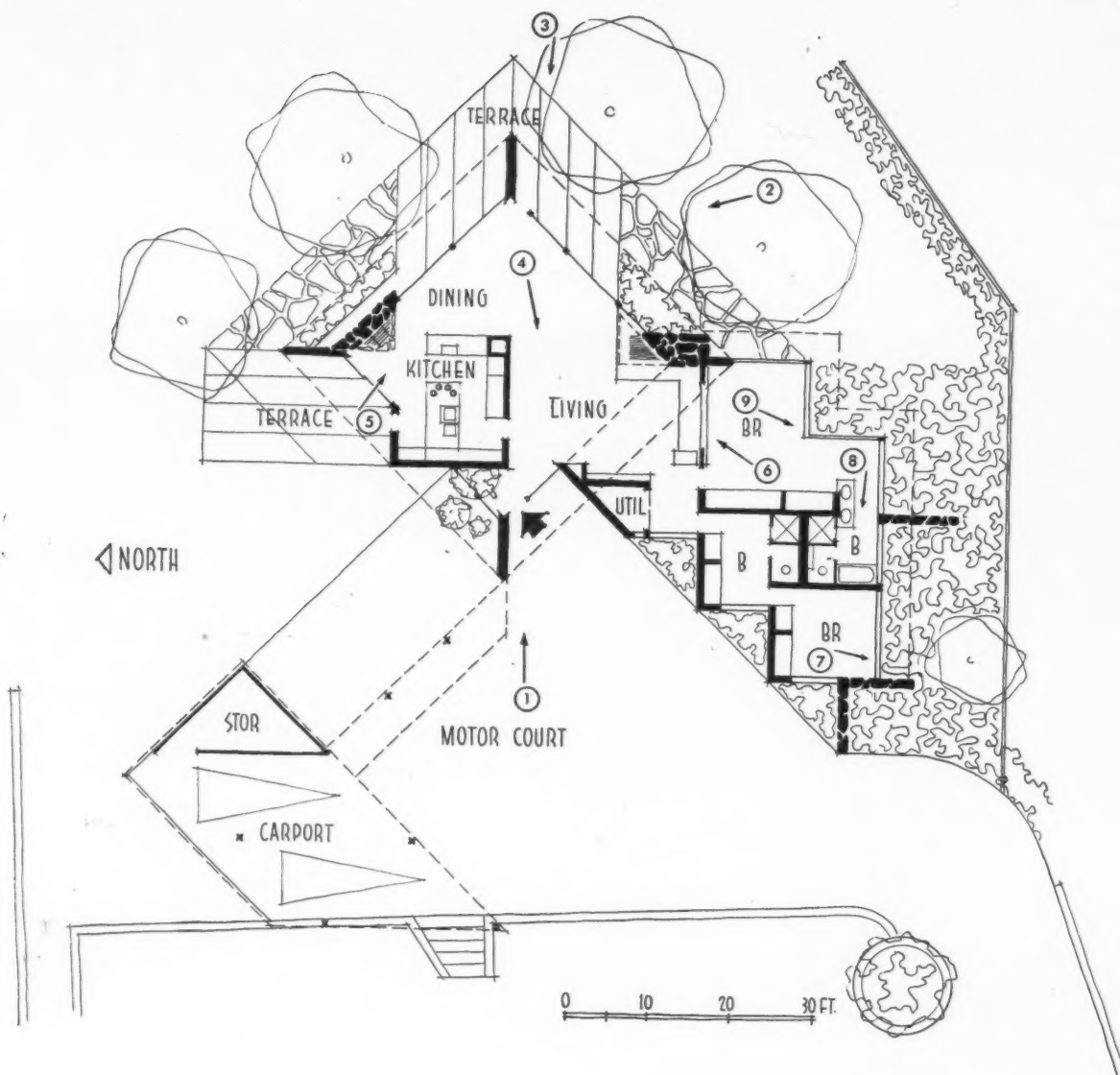
## DIAGONAL TRUSSES PERMIT FOUR-WAY VIEW

*Prepared by John Hancock Callender*

*Residence of Mr. and Mrs. Arch Ekdale, San Pedro, California*

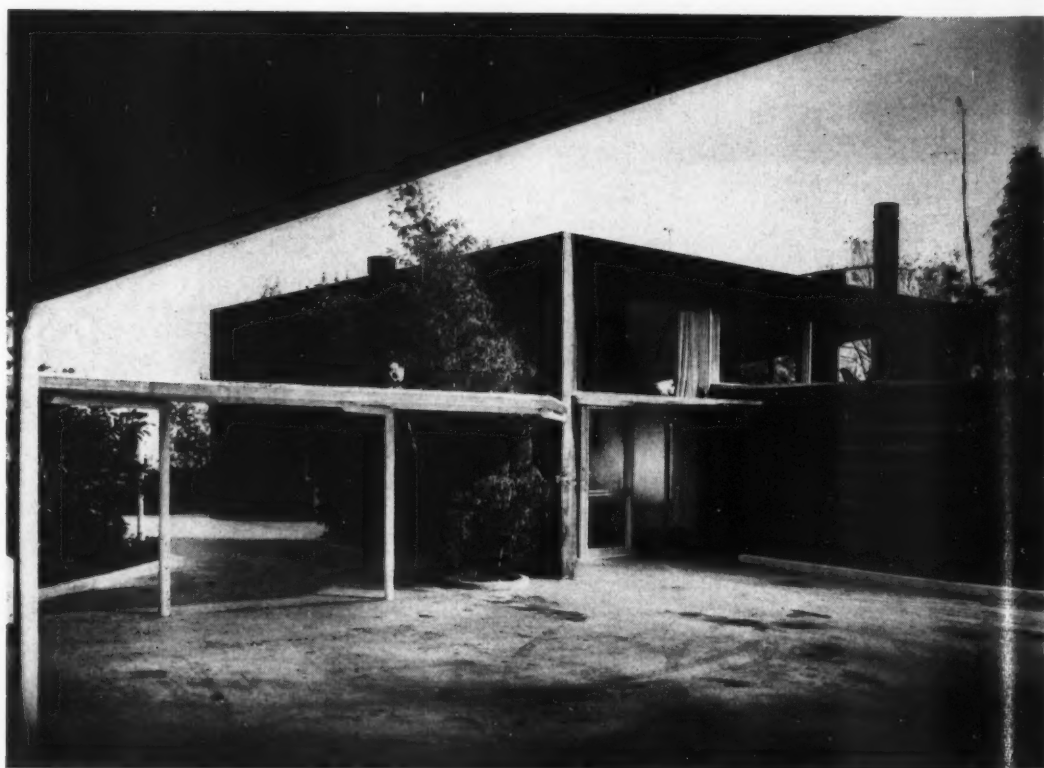
*Sumner Spaulding—John Rex—Architects*

*C. Gordon DeSwarte—Structural Engineer*



HOUSE WITH FOUR-WAY VIEW

1



3



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2

THE SITE, high in the palos Verdes hills, commands a panoramic view in almost every direction. Given a free hand by the owner, the architect met these rare conditions by designing a high, square, glass-walled enclosure for the living area, and subordinating the other parts of the house to this dominant element. The boxiness of this unit is relieved by a roof of unique design — an inverted pyramid with its apex suspended over the center of the room and its sides sloping upward and outward until they meet the eaves 6 ft beyond the glass walls. The roof is formed by two diagonal steel trusses, supported at the four corners of the room. Solid wall fins extend from the corners out to the ends of the trusses, providing structural bracing and visual interest. The effect of this roof on the interior space is to emphasize its loftiness and its four-directional view.

*High square glass-walled bay dominates the design. Bedroom wing kept low and attached to living area where it does least harm to view. Bedrooms stepped back in plan for cross ventilation and better view*



3

4



Julius Shulman

Above: living room extends back into low-ceiling bedroom wing. Right: charcoal grill supplements kitchen range; not shown is soda fountain, another feature of kitchen

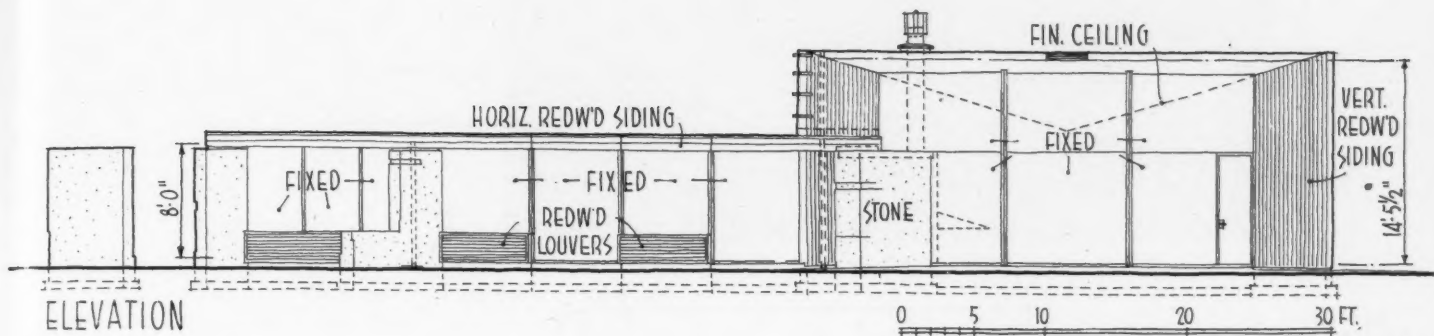
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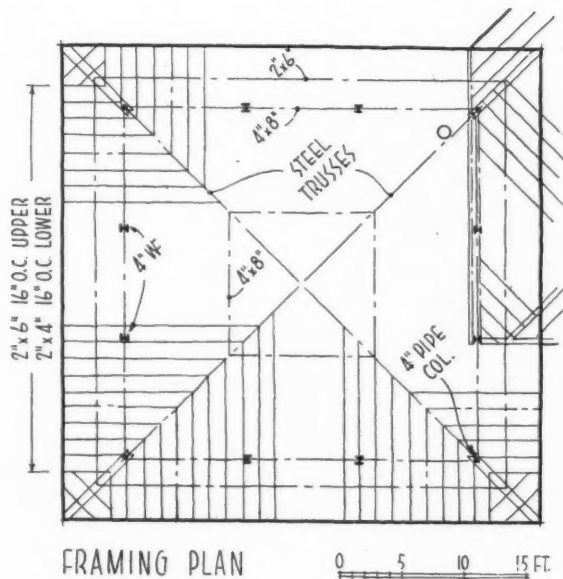
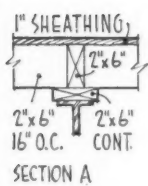
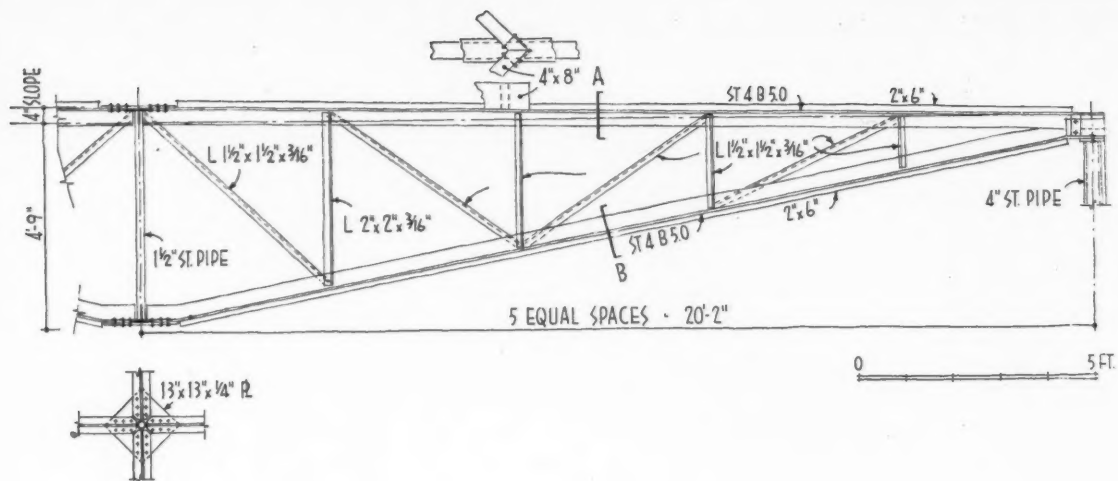


Below: southeast elevation. Exterior materials are redwood and fieldstone picked up on site. Carpentry is by shipwrights; all finish materials screwed and doweled



Below: sliding panels open master bedroom to living room. Sun lamps are installed in ceiling over each bed, and an intercommunication system is incorporated in headboard





Left: roof framing plan and detail of truss. Roof is 39 ft square, enclosed area 28 ft square. Ceiling 9 ft 7 in. at center of room, 13 ft 6 in. at walls. Bedroom ceilings 8 ft. Below: guest room. Opposite page, above: master bath; floors and walls terrazzo; hot water pipes form towel bars. Opposite page, below: master bedroom, looking toward lavatory. Terrazzo floors used throughout house for easy maintenance. Bedrooms ventilated by sliding panels below fixed glass. Heating is forced warm air, oil fired

HOUSE WITH FOUR-WAY VIEW

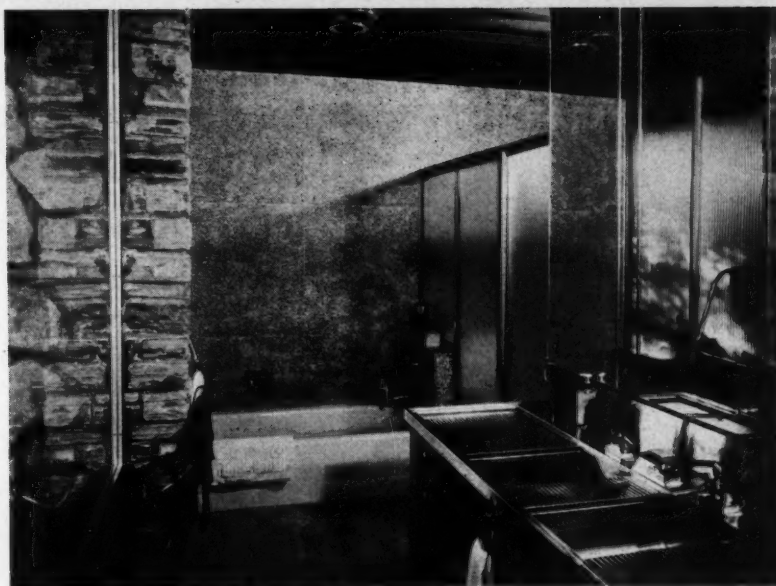
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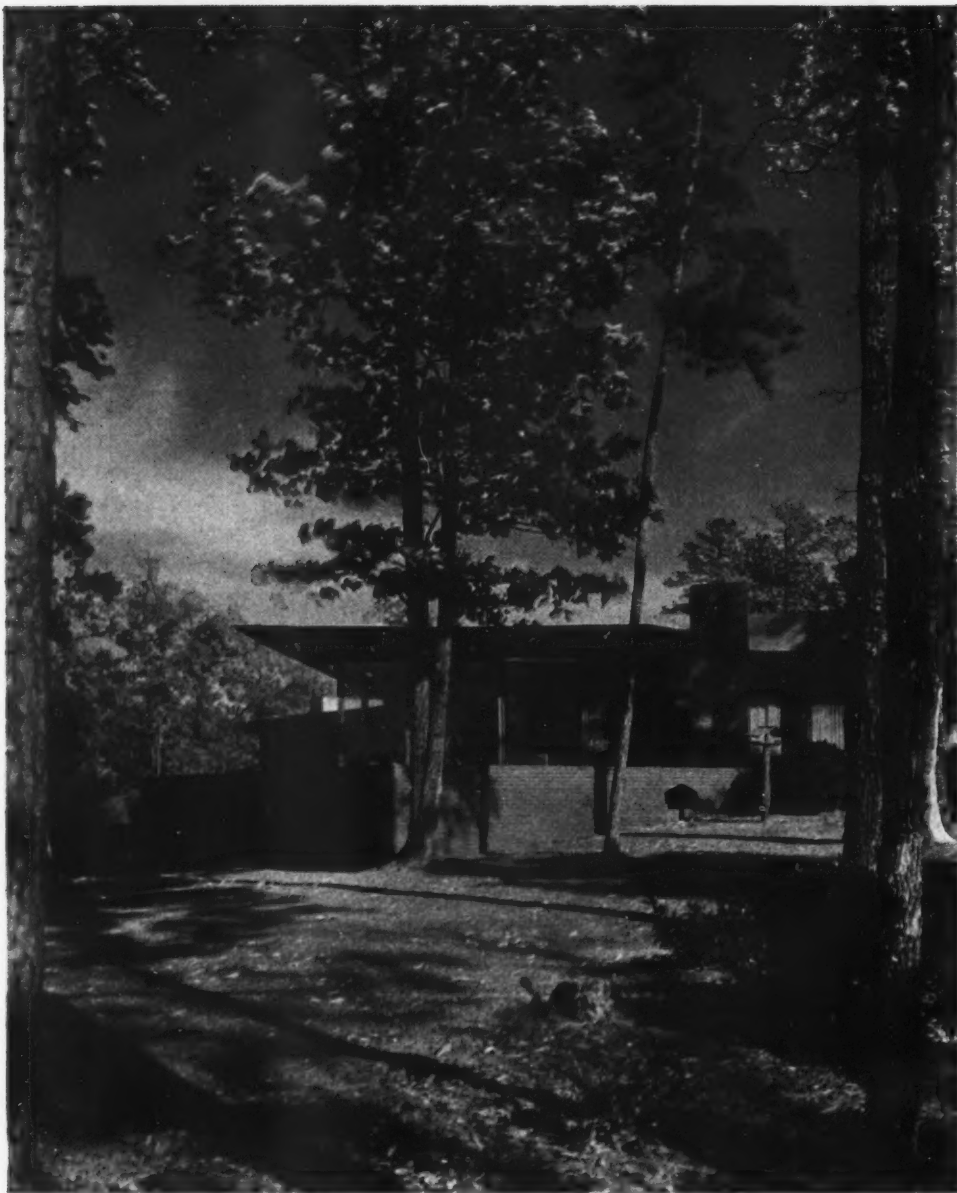
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Julius Shulman



9



# HOUSE ON MO

*Samuel R. Lewis and Associates  
Mechanical Engineers*

*Edward H. Bennett  
Landscape Architect*

*Reside*



*Living room and terrace from west, shown above  
in detail and below in relation to rest of house*

Joseph Molitor





## MOUNTAIN RIDGE

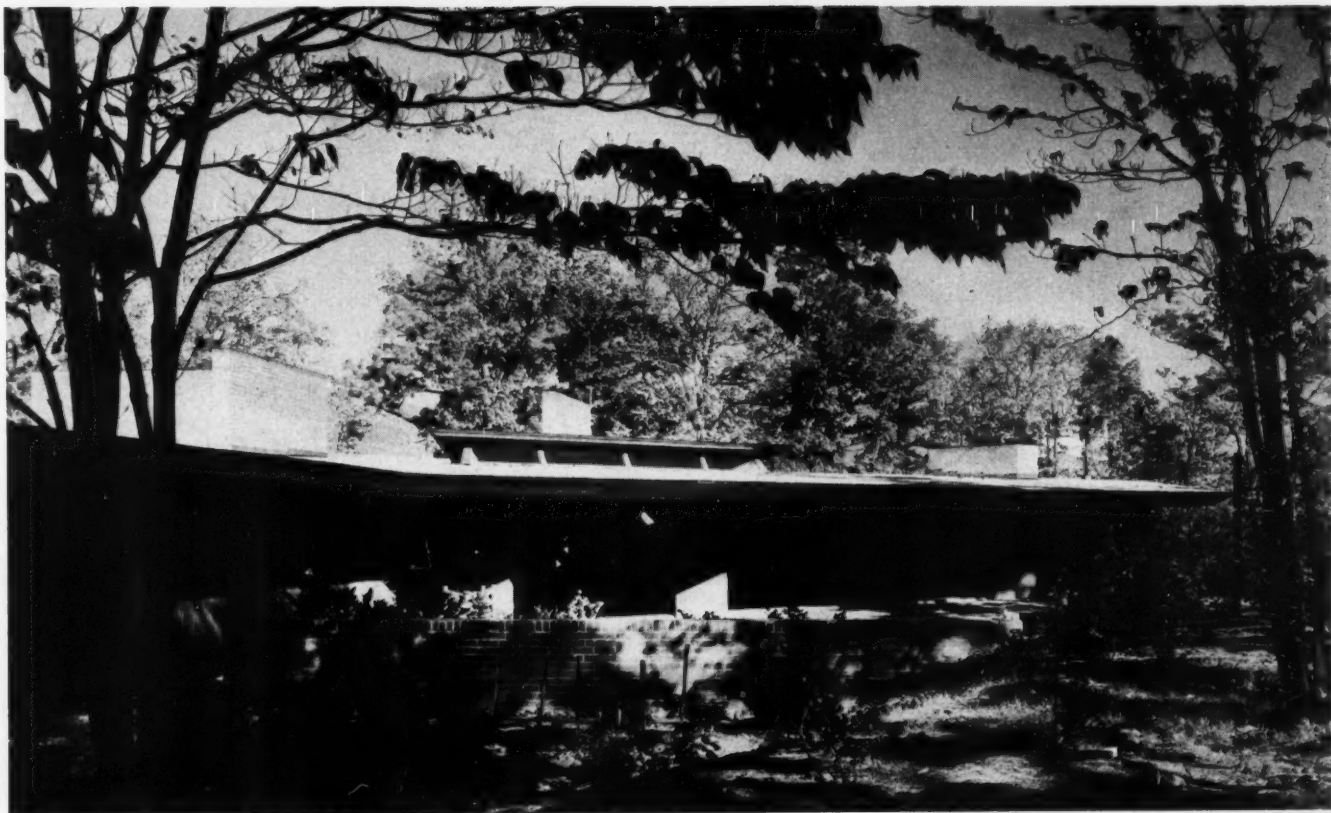
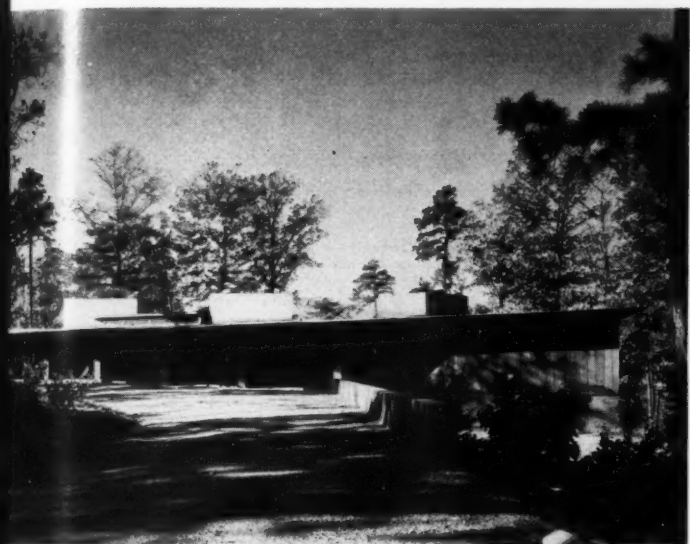
*Residence of Mr. and Mrs. Edward H. Bennett*

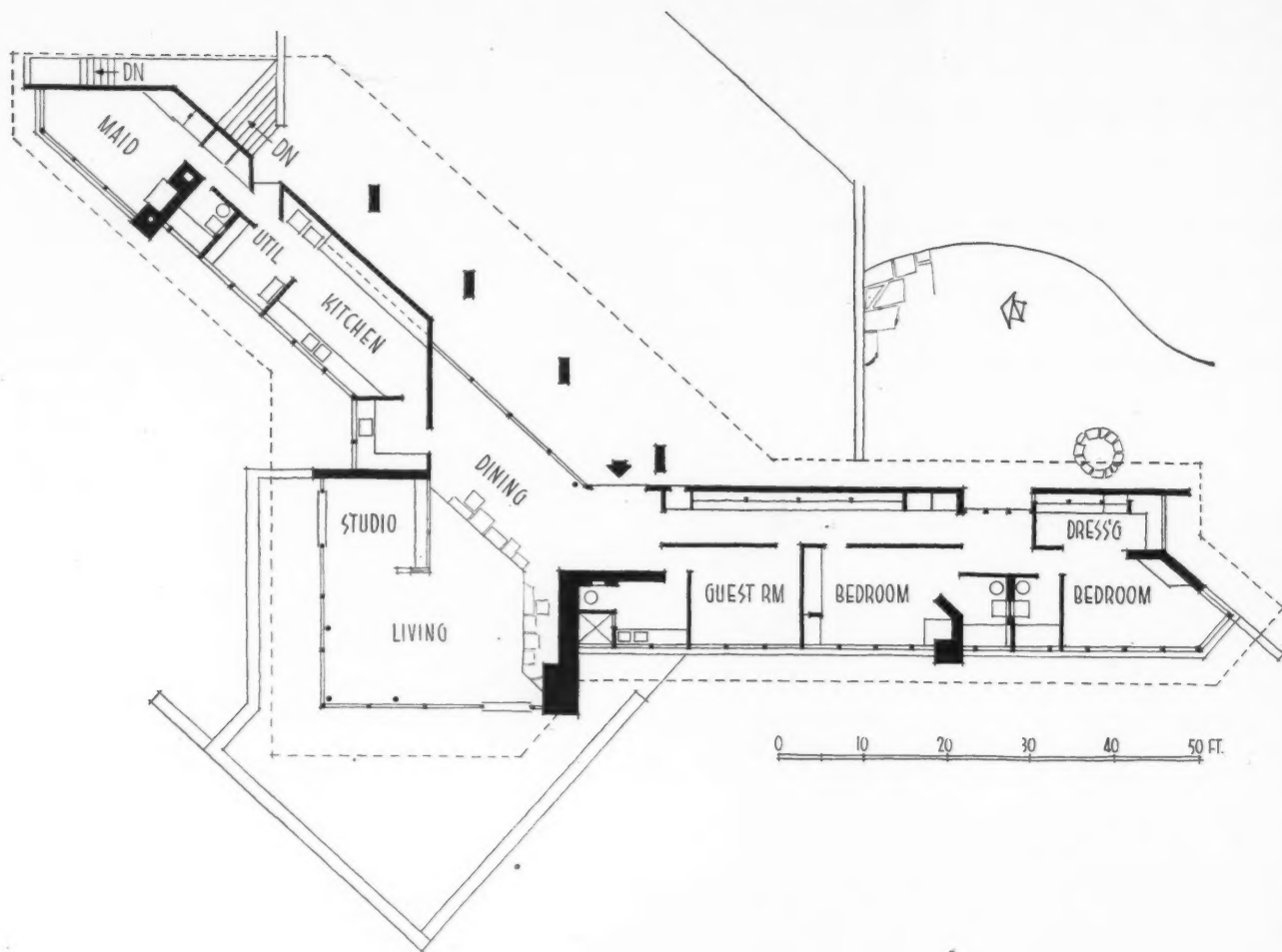
*Tryon, North Carolina*

*Schweikher and Elting, Architects*

THIS house in the mountains of North Carolina was designed for the winter use of a semi-retired city-planner and his wife. The sloping site is heavily wooded and commands a fine view to the west across a valley to the mountains. The plan permits all major rooms to enjoy the view. Separate but adjoining apartments, each with a fireplace, are provided for the owners. They share a terrace on the east, screened from the motor court by a brick wall. The big living room with terrace on two sides, has distinct areas for dining, lounging, and study. The maid's room, at the end of the service wing, has a fireplace and is practically a duplicate of the master bedroom at the other end of the house. There is no garage nor any carport in the usual sense. Instead, a projecting roof along most of the entrance side of the house, can shelter several cars at once. It also provides a covered walk to the entrance door. Entrance side of house has no glass except at dining area. The roof pitches in a single direction, upward from the entrance side. The masonry walls opposite the entrance and between study and pantry are carried above the roof to the same height as the chimneys.

Left: general view of entrance side of house seen from drive. Service wing at right, bedroom wing at left. Below: main entrance, with skylight over dining area. In foreground, terrace outside bedroom wing, separated by brick wall from entrance court





Ventilation in bedroom wing is through single giant louver below the windows. Bottom-hinged doors on interior drop down to hang flush with wall

HOUSE ON MOUNTAIN RIDGE



Joseph Molitor

Right: living room fireplace, terrace beyond. Below: dining area overlooking entrance court. Since roof extends almost 18 ft beyond glass wall, skylight is provided. Door to pantry at left. In both views intersecting ceiling boards give illusion of ridge or mitre; ceiling is actually one plane







End of bedroom wing, seen from outside (above) and inside (below). Bottom of page: living room terrace. Fore-shortened wall is same shown on p. 122



Joseph Molitor

HOUSE ON MOUNTAIN RIDGE



SITE, OWNER'S REQUIREMENTS AND BUDGET —  
SOMETIMES IDEAL, ALWAYS A CHALLENGE

Since buildings must be designed for use, restrictions of one sort or another are an inseparable part of architecture. The conditions imposed by the site, the requirements of the owner, and the limitations of the budget are all restrictions in a sense. When we speak of an architect's design as a "solution," we are referring to the problem presented by these restrictions.

Although architecture without restrictions is inconceivable, too many restrictions can easily stifle it. Up to a certain point, restrictions may actually be beneficial, by challenging the architect to do his utmost. But where the restrictions are so severe that they dictate the design of the building, they may be fatal to architecture.

In residential design the deadliest of all restrictions is an insufficient budget. This in itself is a serious obstacle, but normally not insurmountable. It is the indirect effect that is most to be feared. Where the owner must borrow heavily in order to build, the resale value of his house becomes all-important. In such a case the design of the house is often determined, not by the architect and not by the needs of the owner, but by the mortgage lender's idea of its resale value.

On the brighter side is the fact that now and then an architect has the good fortune to be able to carry an architectural idea through to fulfillment without having to compromise on any essential point. If the architect is clear in his own mind as to what he wants to say and if he has the skill to say it clearly, the result will be interesting architecture, at the very least. If what the architect has to say is important, the result may be great architecture.

The Ekdale house is a brilliant example of what can happen when site, client, and architect are all exceptional, and restrictions are not severe. A clear-cut architectural idea has been skilfully stated and carried through without compromise. The same is true of the Bennett and the Palmer houses. The Poetker house differs from these only in that its successful result was achieved in spite of extreme difficulties. Possibly this is a case where the numerous obstacles stimulated the architect and resulted in a better design than would otherwise have occurred.



Hedrich-Blesing

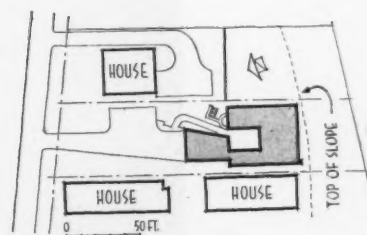
## SITE CHOSEN FOR VIEW DESPITE DRAWBACKS

*Residence of Mr. and Mrs. Joseph G. Poetker*

*Mt. Adams, Cincinnati, Ohio*

*Garriott, Becker & Bettman, Architects*

*O. W. Motz, Mechanical Engineer*



**D**ESIGNING A HOUSE to exploit the dramatic view afforded by a site high above the city, presented many difficulties. The narrow, deep lot, in a built-up and by-passed section of the city, was hemmed in on the west by two high and ungainly frame tenements. To the east, however, lay only the unused backyard of a house built close to the street. The U-shaped plan with entrance through the court, blank west wall, and bedroom facing east, was the direct result of these site conditions.

The partially covered entrance court, adopted by

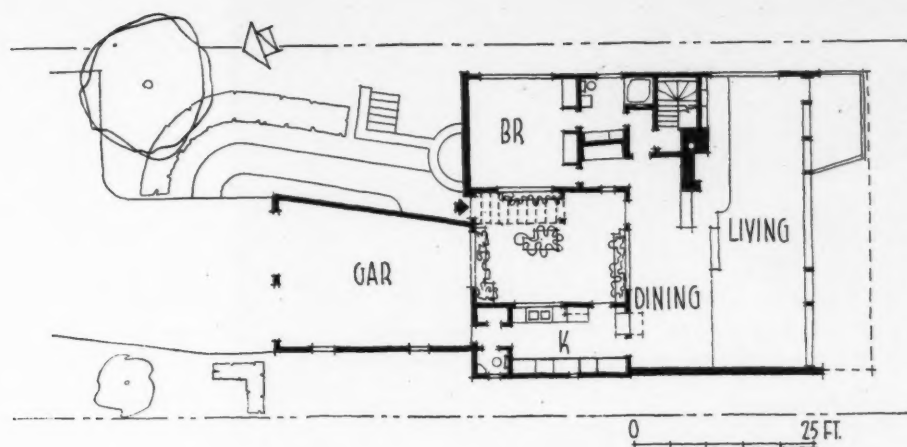
necessity, proved to be one of the pleasantest features of the house. The small sheltered area is an effective contrast to the big living room with its magnificent view. The view can be enjoyed even from the court, as shown in the illustration on page 130.

Floors and walks are paved with an old local brick of a dark purplish red color. In addition to hot-water radiant heat in the floor slab, a separate hot-air system blankets the 40-ft glass wall in the living room from slots in the floor. An 8-ft roof overhang keeps out the summer sun.

SITE CHOSEN FOR VIEW







Hedrich-Blessing

House is at rear of 50 by 200 ft lot, giving privacy from street and scope for landscaping by florist owners. Turn-around and parking space for several cars is provided, shown in part at upper left of plan above. Right: entrance court seen from entry. Below: main entrance, bedroom wing at left. Opposite page: living room with view for which house was built





*Left: entrance court with view through entry and living room to distant river and beyond. Kitchen at right. Trellis marks entrance walk and protects privacy of high bedroom windows from adjacent building. Below left: kitchen seen from dining room. Breakfast table folds up to close pass-through completely. Below right: dressing table in master bath*

Hedrich-Blessing

SITE CHOSEN FOR VIEW



## DESERT HOUSE WITH VIEW TO SOUTH

*Residence of Dr. and Mrs. Paul Palmer*

*Phoenix, Arizona*

*A. Quincy Jones, Architect*

*Edgardo Contini, Engineer*

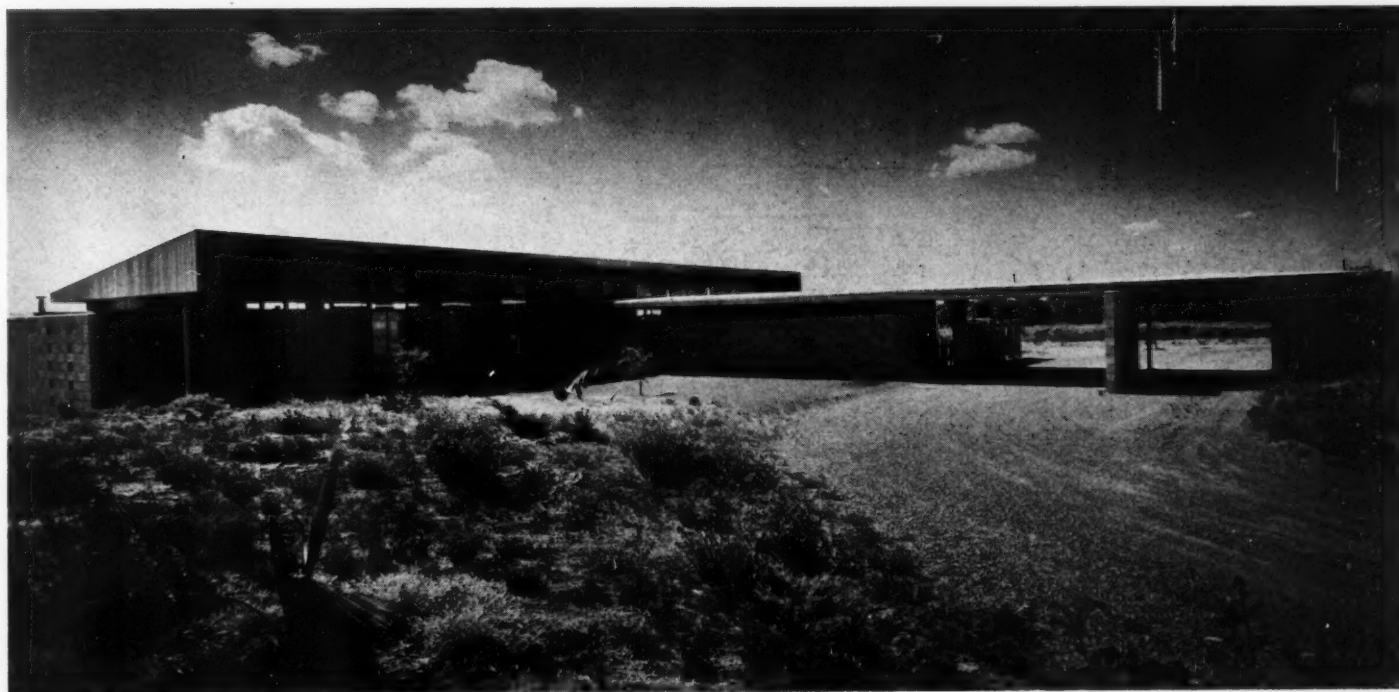
THE DESERT SITE slopes down from Camelback Mountain on the north. To the south there is a pleasant view of the valley and the distant city. The approach is from the north, which makes it difficult to take advantage of the view of the mountain without sacrificing privacy.

The house was designed for a doctor and his wife and their two sons and three daughters. Facilities are provided for full family life, or complete separation

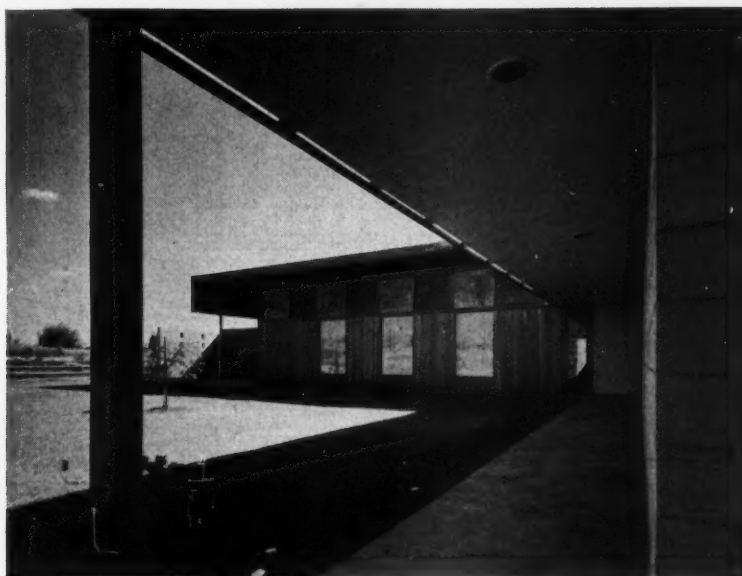
of the two generations. A huge living-dining-playroom is the center of family life. However, if this room has been taken over by the teen-agers, the parents can entertain their friends comfortably in the study-sitting room adjacent to the master bedroom.

Alcove partitions in children's wing extend only to door-head height, facilitating future rearrangement as living needs change.

Each wing has its own outdoor living area.



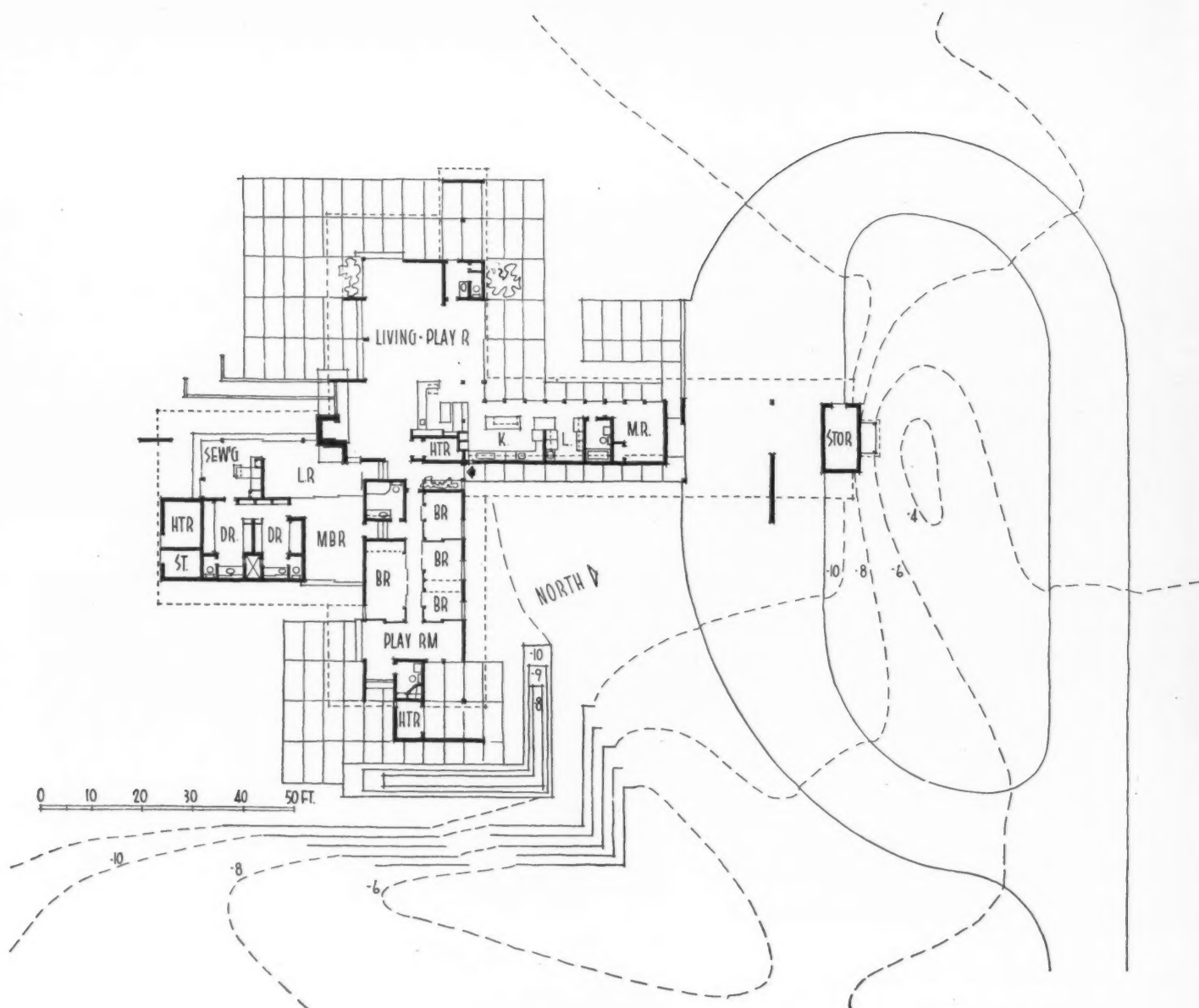
Stuart A. Weiner







Stuart A. Weiner





*Opposite page: living room terrace, master wing on right. Outdoor dining is to north of living room where it is shaded from the afternoon sun and enjoys the view of Camelback Mountain. Above: children's wing and terrace. Below right: terrace outside master wing*



*On the plan (opposite page) separate functions are clearly expressed in the four distinct wings. The house is fully air conditioned by means of three separate package units. White gravel roofs, ceiling insulation, and large overhangs reduce the cooling load*



Stuart A. Weiner

# DESERT HOUSE

Floors are concrete, cork in the children's wing, asphalt tile in kitchen and baths. Interior finish is natural redwood or painted plywood. Behind curtains (right) sliding glass doors open to outdoor dining area. Handles in ceiling operate sliding clerestory windows





# HOUSE TURNS INWARD ON PATIO FOR PRIVACY

*Residence of Dr. and Mrs. William S. Beck*

*Los Angeles, California*

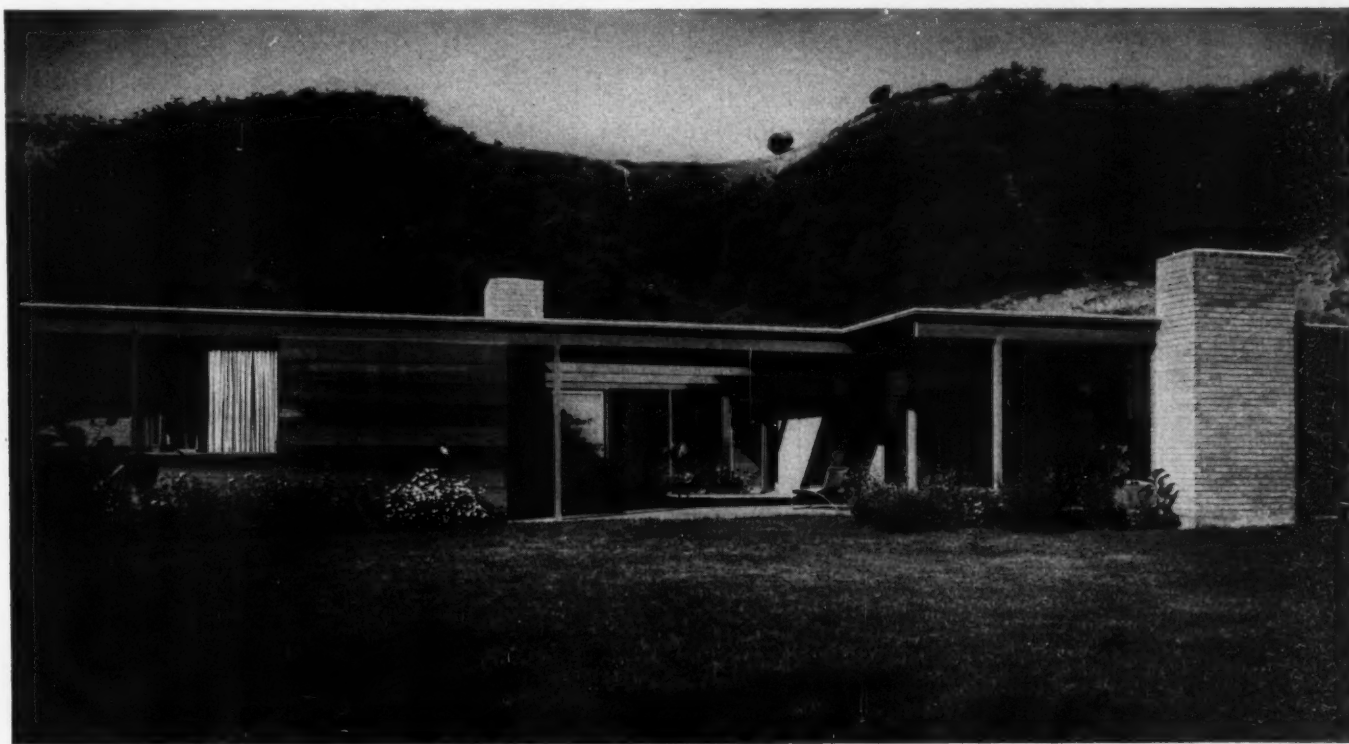
*Thornton M. Abell, Architect*

*Hillman & Nowell, Structural Engineers*

**T**HE HOUSE WAS DESIGNED for a young doctor, his wife and their two small children. The master bedroom is also a study, intended for serious work. This large, comfortable room with its own fireplace can readily be used as a second living room in the future when the children entertain their friends in the main living

room. The children's bedrooms open onto their private play yard in front of the house, protected from the street by a high fence. Children can also play in the patio under supervision from the kitchen. A bedroom and bath near the entrance can be used either as a guest room or a servant's room.

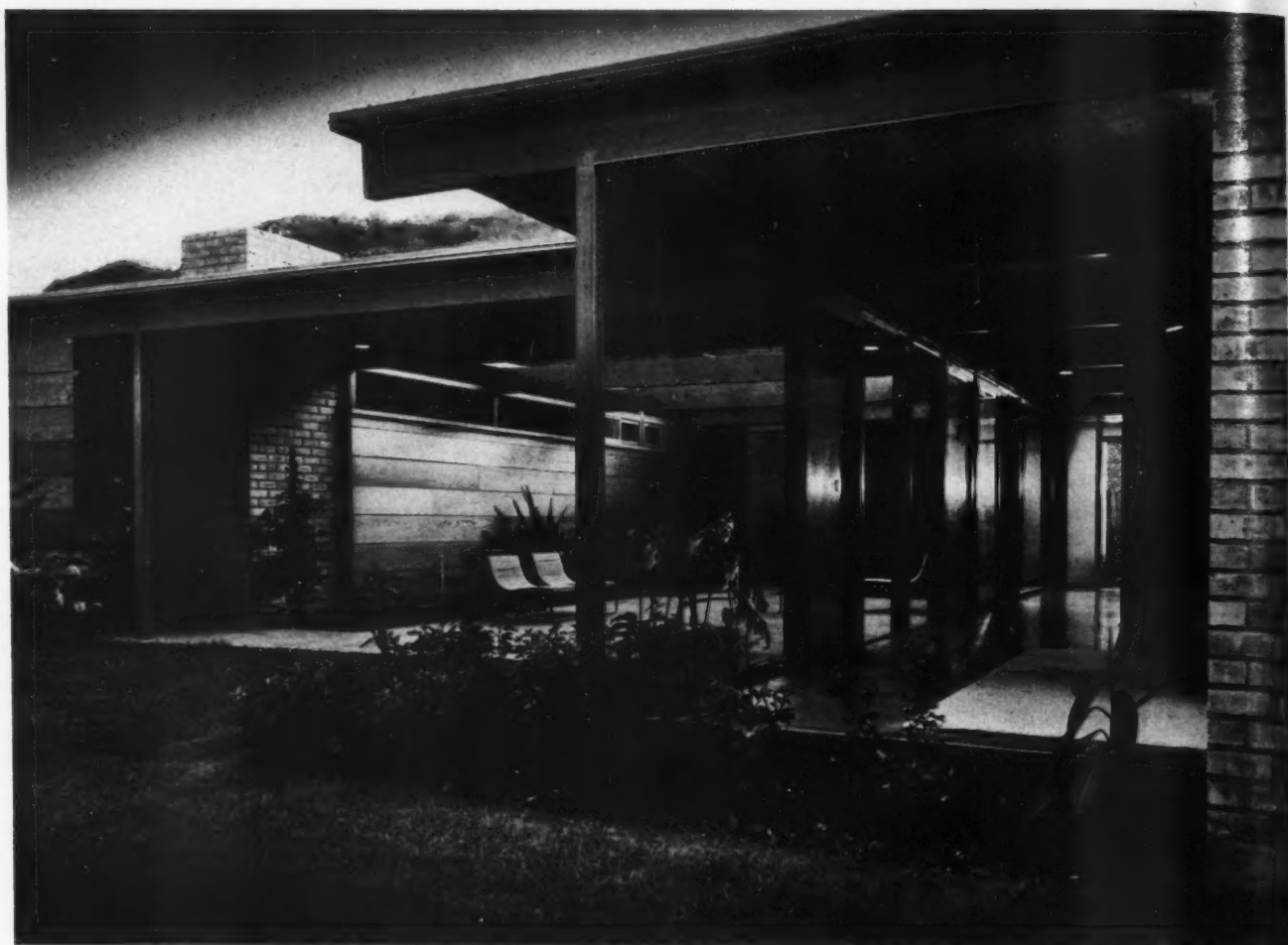
Julius Shulman



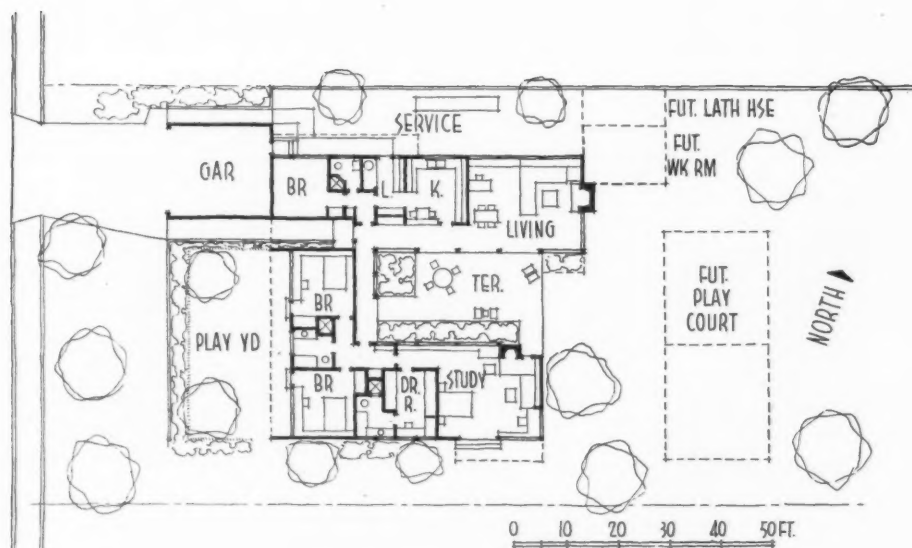
With neighbors close by on each side, the house turns inward upon its patio and also opens out to the rear, which is entirely private. Seen from the street, the house is completely closed (right). In striking contrast is openness as seen from rear (above)



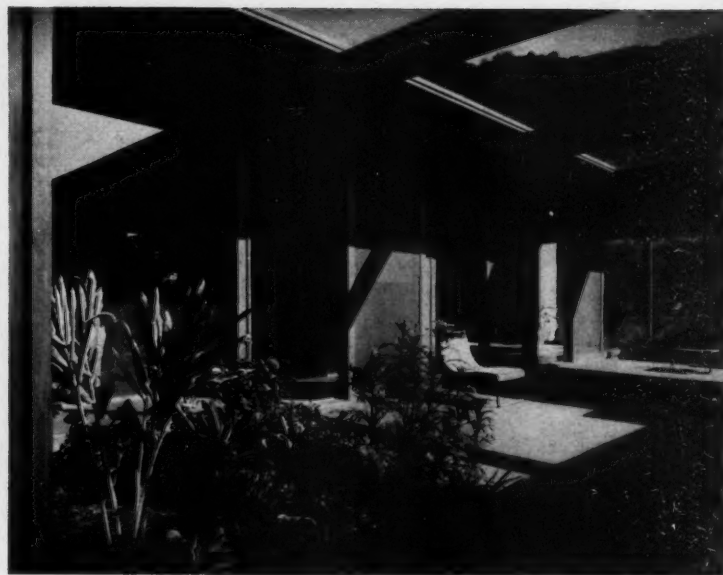
# PATIO HOUSE



Julius Shulman



Locally popular patio plan is ideal solution for narrow lot between existing houses. U-shaped plan opens to rear (east) where property extends high up side of wooded canyon. Principal rooms open onto partially covered patio, used most of year as outdoor living room. Construction is plank and beam on exposed posts in 8 by 18-ft bays. Concrete slab floor with radiant heat



Above and opposite: three views of "outdoor living room." Absence of draperies brings indoor and outdoor rooms into closer relationship. Below: obscure glass provides privacy on other wall of living room







*Above and below: master bedroom and study. Interior finish natural redwood or plywood stained yellow. Ceiling plank stained light turquoise. Structural frame, windows and doors, stained deep gray-green. Floors gray*



*Julius Shulman*

# PATIO HOUSE

# HOUSE FOR SUBURBAN CORNER LOT

*Residence of Miss Agnes Palley*

*Scarsdale, New York*

*Sanders—Malsin—Reiman, Architects*

**T**HE SITE is a corner lot in a highly conservative suburban community. With streets on the south and west sides of the property, the architect's problem was to provide favorable orientation along with a reasonable degree of privacy.

The house proper is a compact rectangle, 32 by 42 ft, with its shorter dimension facing the street. Needed length has been given to this elevation by means of a continuous roof across house and garage. This provides a covered walk between garage and service entrance, a convenient location for the basement stair, and on the rear a screened porch conveniently located for outdoor dining.

Concrete block walls are kept almost free of openings which is economical and also improves their appearance. Windows and doors are concentrated in wood walls, whose lightness is in pleasing contrast to the unbroken planes of masonry. The change of materials is emphasized by projecting the ends of the concrete walls beyond the plane of the wood and glass walls.

Gas-fired warm-air heater and domestic hot water heater are located in partial basement under front part of house, the remainder of the house being built over crawl space. Roof is topped with marble chips and edged with copper. Wood siding is stained fir.



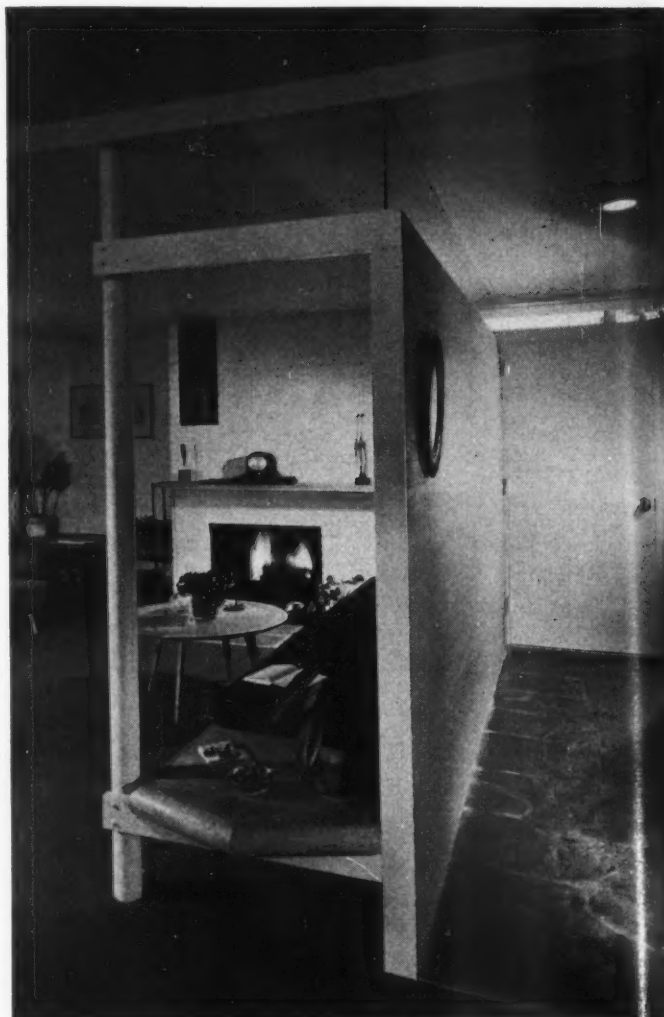
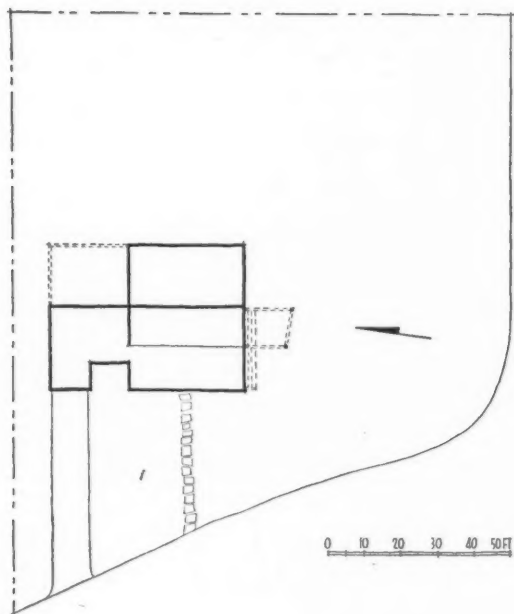
Ben Schnoll

View from southwest. Living room and terrace on right and service entrance on left are screened by planting

# SUBURBAN HOUSE



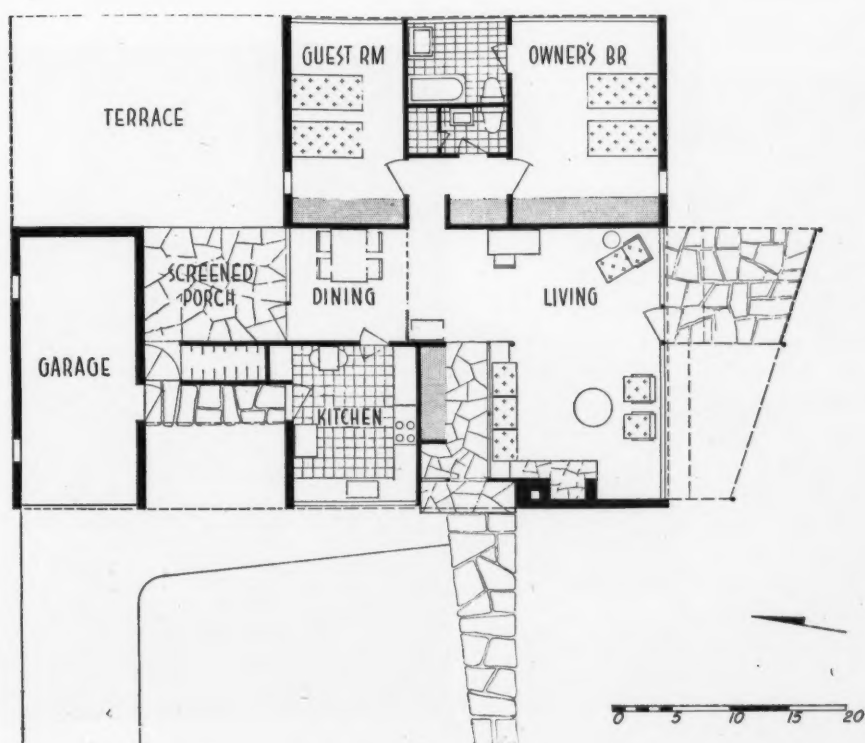
Above: view from southeast, showing rear elevation of wood and glass contrasted with almost unbroken masonry wall on south. Skylight and terrace sunshades add interest to exterior appearance and help to avoid boxy look often seen in small flat-roofed houses. Plot plan (below) shows house located near north property line in order to provide maximum privacy on south. Garage screens house on north. Bedrooms are on rear facing east. Living room is on south and opens onto terrace, screened from street by fence. Right: built-in seat utilizes structural column

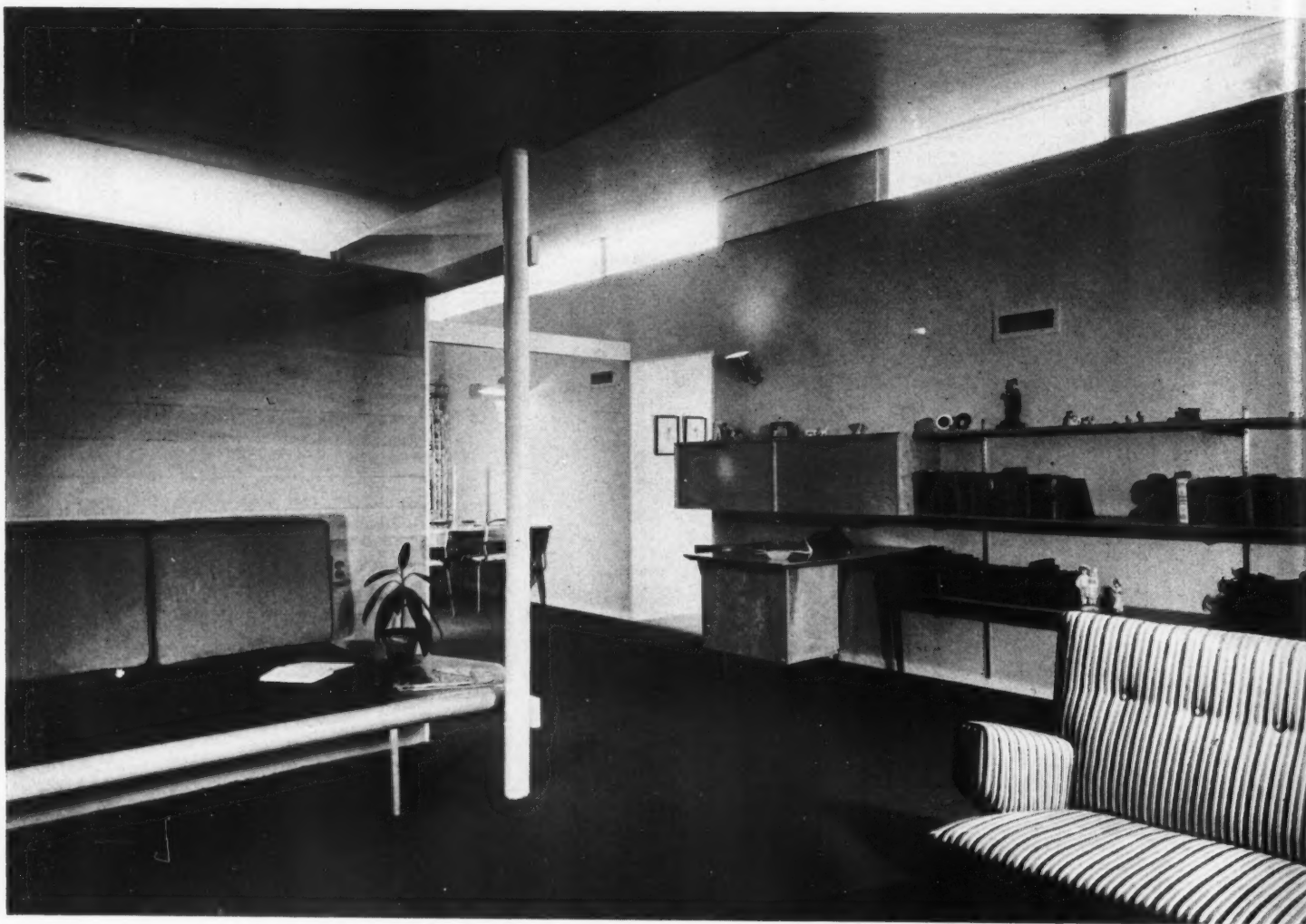






Privacy for terrace is provided by planting on west and fence on south. Fence and large trees provide afternoon shade. Louvered sunshades protect living room glass. Beams support sunshades, brace fence, furnish frame for future awnings, and tie whole together to form interesting spatial composition





**SUBURBAN HOUSE**

*Continuous clerestory at rear of living-dining area provides extra light and ventilation, also adds interest and height to low-ceilinged room. Screened dining porch can be seen beyond dining room (right)*

Ben Schnall

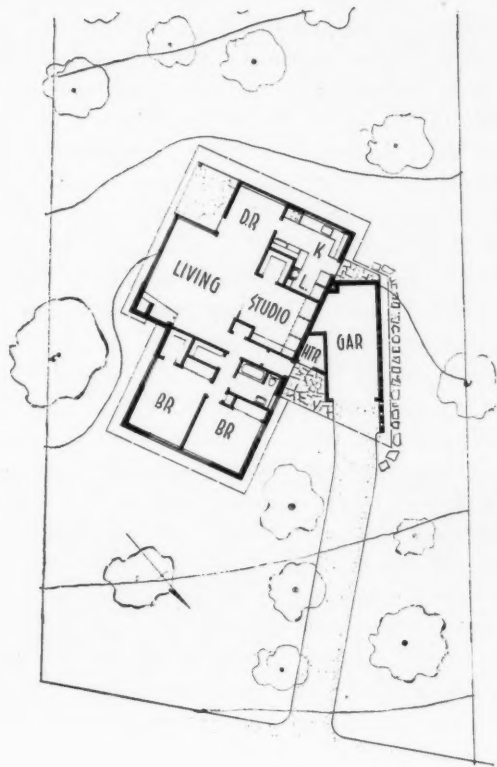


## HOME FOR CARTOONISTS' FAMILY

*Residence of Stanley and Janice Berenstein*

*Elkins Park, Pennsylvania*

*Norman N. Rice, Architect*



THIS HOUSE for the well-known cartoonists and their young son, was built on a 75 ft suburban lot with existing houses close by. By setting the house well back and angling it in relation to the street, direct view of the neighboring houses was avoided and a pleasant southerly exposure provided for the living area. This also permitted the studio to face more nearly north.

At the 1951 Exhibit of the Philadelphia Chapter, A.I.A., the house received the Home Builders' Association award as "the most distinguished suburban house by a Philadelphia architect."



Don Moerder

Exterior walls are waylite block or cedar siding. Interior mahogany plywood







Plan was kept compact by making studio inside room with skylight and window-type air-conditioner. Studio walls natural redwood. Below: studio can be opened to living room for spacious entertaining

# CARTOONISTS' HOUSE



Dan Moerder

## SUBURBAN SITES AND MODEST BUDGETS

### INCREASE DESIGN RESTRICTIONS

The last four houses, all built on suburban lots and on modest budgets, have more restrictions to contend with than the first four. This may make them less interesting perhaps as architecture, but more interesting probably to architects, since they are nearer to the type of problem most often encountered by the residential designer. In these houses the emphasis shifts from exploiting a view to protecting privacy. While larger houses can rely upon remoteness for privacy, suburban houses must resort to such devices as high windows, obscure glass, planting and fences.

Of the suburban group, the Beck house is remarkably successful. It accepts its limitations gracefully, states its ideas clearly, and carries them out skilfully. The design is notable for its easy confidence and the absence of any straining for effect. There is no pioneering here, but instead the calm assurance that comes from working in a well-established tradition.

The house designed for sale has special limitations, in addition to having usually very stringent site and budget restrictions. Designing a house that will be suited to the needs of a large number of unknown families is more difficult than tailoring one to fit a single family. In this case the architect's client is an operative builder; he is not interested in living in the house, but in selling it. His first requirement from the architect is a house that will sell.

This is a field which architects have generally avoided in the past. But in recent years, with encouragement from Southwest Research Institute, the National Association of Home Builders, and the American Institute of Architects, many leading architects have entered this field. Another way of saying the same thing is that many operative builders are beginning to realize the value to them of good architectural services. In this connection it is interesting to note that while some builders are still avoiding architects entirely and others are shopping in the basement of the profession for the "cheapest" architect they can find, Eichler Homes is currently employing two of the West Coast's most distinguished architectural firms.

An unusual opportunity is presented in these pages to compare the work of one of these architects, A. Quincy Jones of Los Angeles, in two very different fields of residential design — a large custom-designed house for the Arizona desert and a small house designed (with Frederick E. Emmons) for a builder's development in northern California. Each of these houses is notably successful within its own field, and in spite of the great disparity between the two, there are perceptible similarities which mark their common origin.

# DEVELOPMENT HOUSE OF HIGH QUALITY

*Eichler Homes*

*Palo Alto, California*

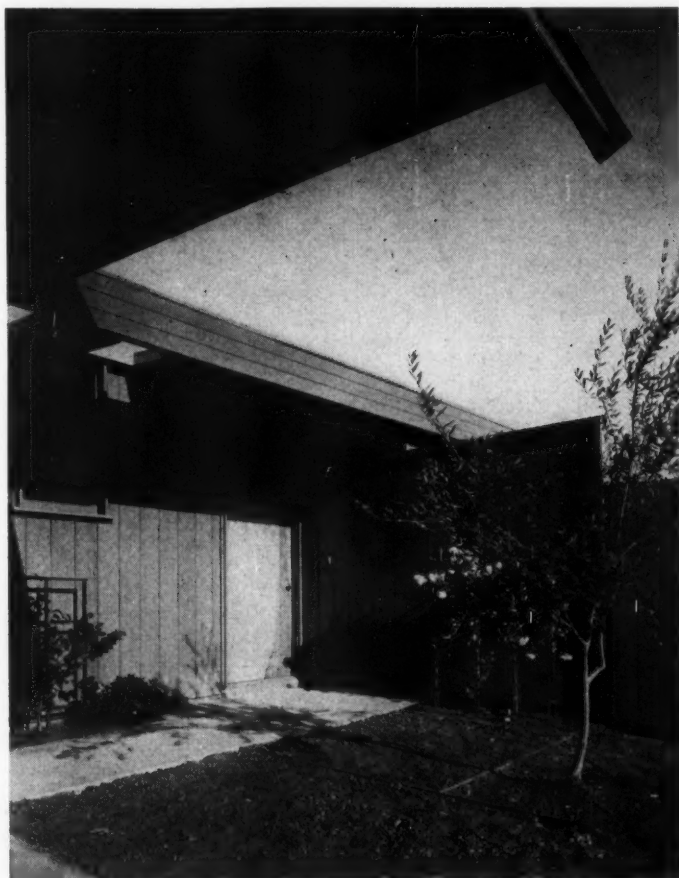
*Frederick E. Emmons — A. Quincy Jones, Architects*

*Anshen and Allen, Architects: Site Planning*

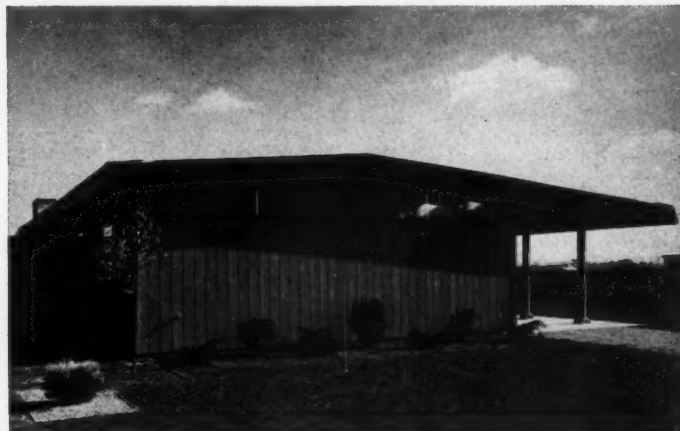
THIS is the model house for a 94-house development known as Fairmeadow. Four other models are offered, each with several variations. Prices for these three-bedroom, two-bath houses range from \$14,750 for the model shown here to \$15,750 for a model with an extra "all-purpose" room. Prices include the lot (6000 sq ft minimum), concrete terraces, redwood fences, electric range and refrigerator. Deducting \$2500 for the lot, the cost of the house itself is less than \$10 per square foot.

The circular site plan was an effort to give interest to a flat, treeless site. It resulted in 50 fewer lots than in the conventional grid scheme.

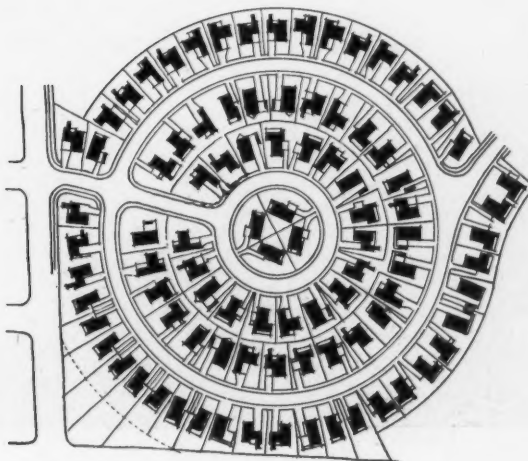
This development and three others by the same architects and builders were recently cited by the Housing Research Foundation of Southwest Research Institute as "the developments built during 1951 which best express the aims of the Quality House Program." These aims (see ARCHITECTURAL RECORD, May 1950, pp. 125-127) are briefly to improve the quality of the houses built by speculative builders. From the beginning the Institute has emphasized that this can come about only by getting good architects to work closely with good builders. Fairmeadow, already highly successful, is convincing proof that such collaboration is beneficial to architect, builder, and the public.



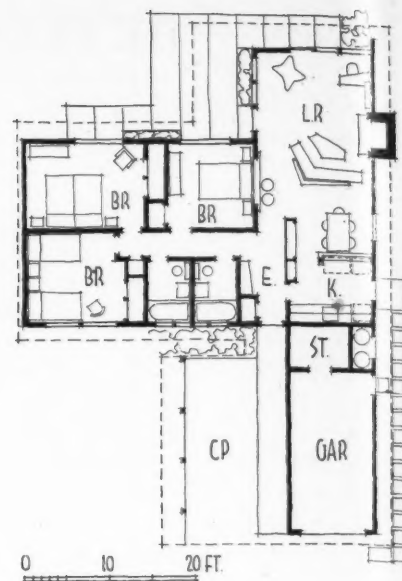
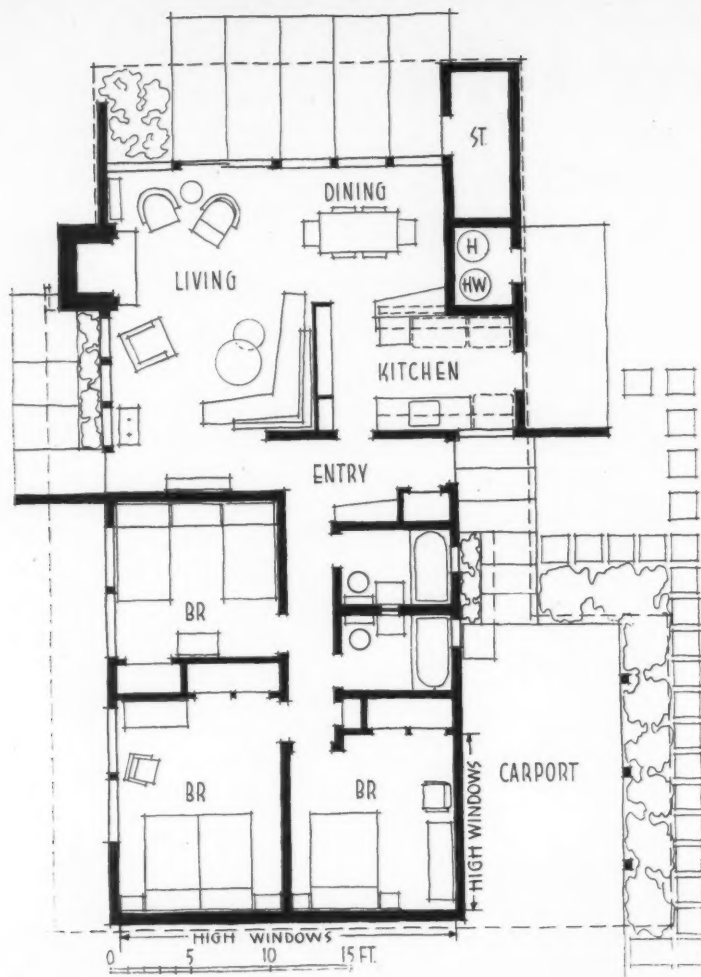
Randal Partridge



High bedroom windows face the street



DEVELOPMENT HOUSE

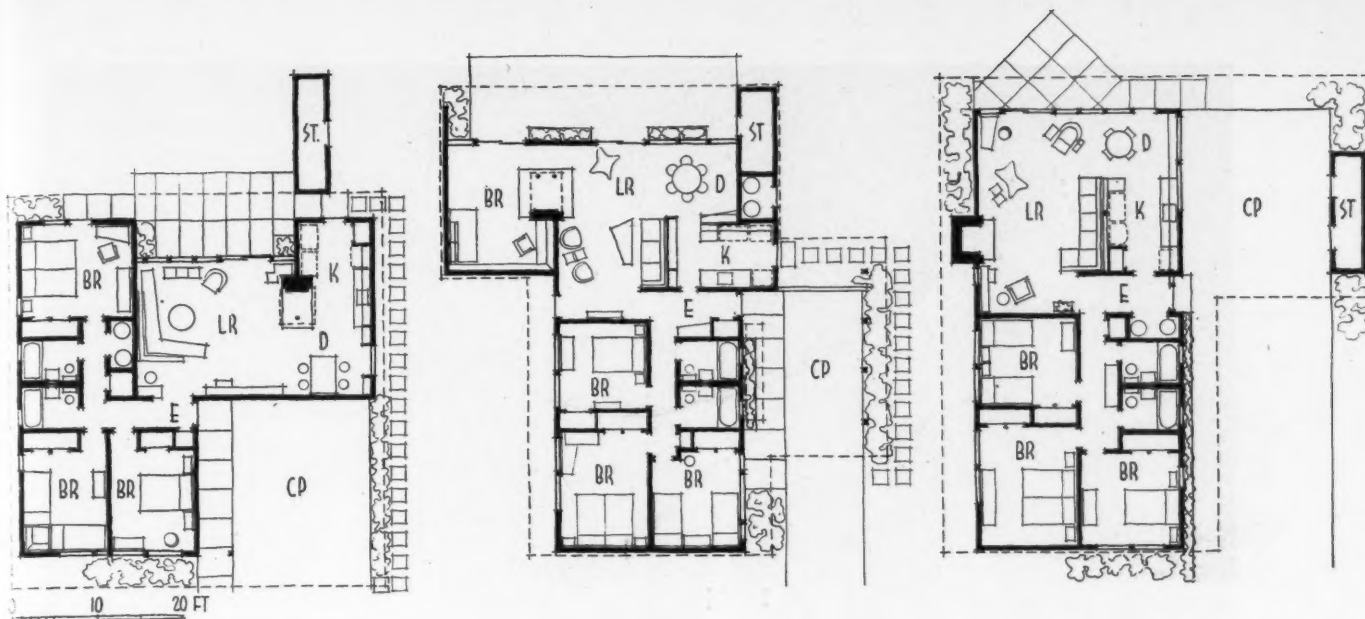


Rondal Partridge



Construction is plank and beam on radiant heated slab. Exterior finish stained redwood siding. Interior finish, redwood plywood, mahogany plywood (kitchen cabinets in view above), or redwood siding. Outlets provided for telephone and television. Roofs tar and gravel, built-in gutters. All models have fireplaces

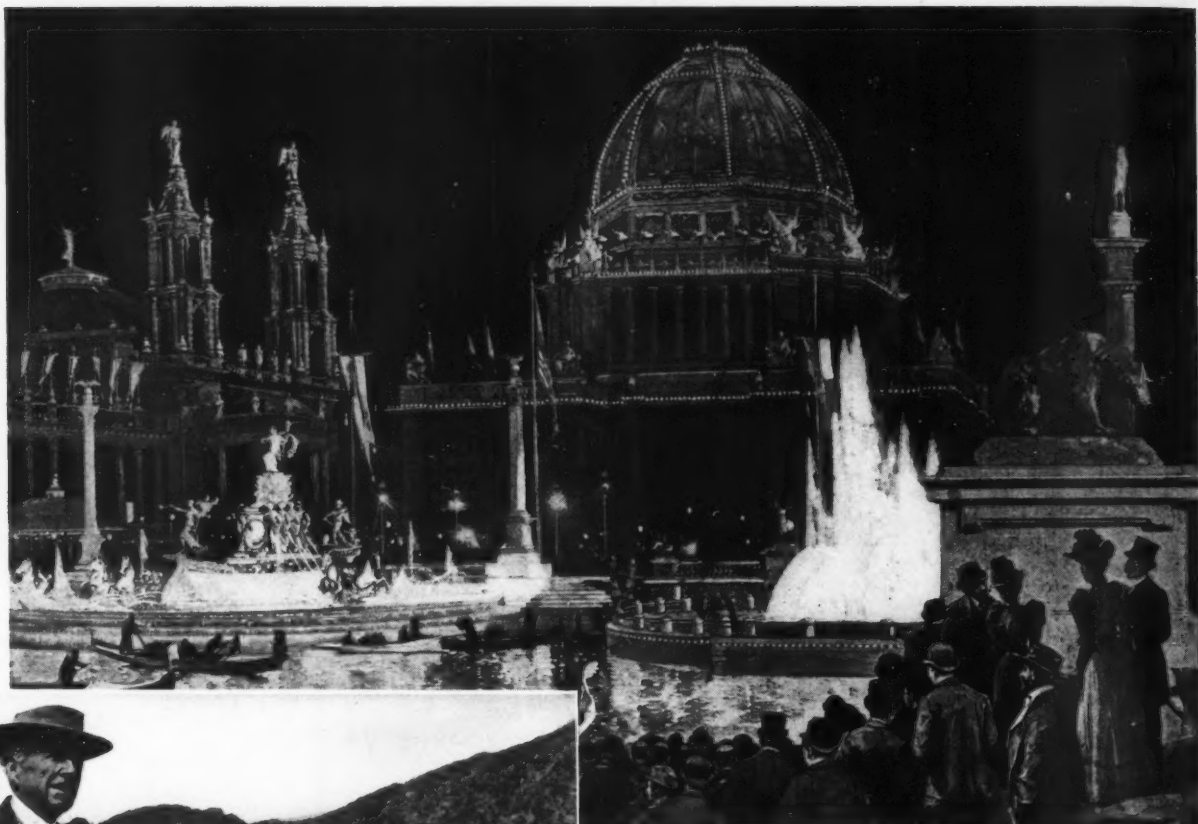




Plan of model house, opposite page, extreme left. Plans of the four other models above. All have bedrooms on street side, living areas at rear opening out to terraces, fenced for privacy

All models have entries, all but one have completely private internal circulation. Below: six-foot overhang makes terrace into porch. Glass wall at left of fireplace opens onto side terrace





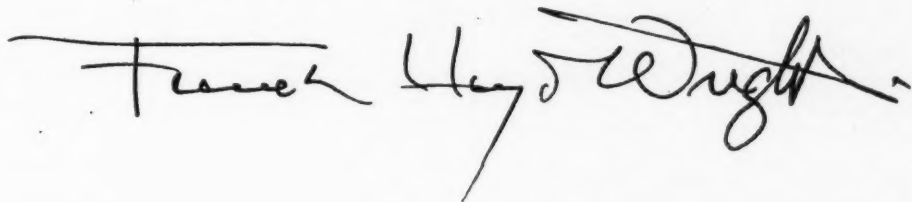
*Frank Lloyd Wright never went to see the Chicago Fair (Columbian Exposition, 1891-93). Nevertheless the view of it, above, is typical of the time in which he formulated his principles of architectural design — 1894. State Street in Chicago, where Wright began, looked like the drawing below*



Few realize that the principles of Wright's "organic architecture" were actually written in 1894. They were first published in an article by Wright in *ARCHITECTURAL RECORD*, March 1908, and are republished here (top of succeeding pages), along with his current article. His credo, dated 1894 but difficult to improve upon today, is important background for his criticism of the contemporary architectural scene.

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## ORGANIC ARCHITECTURE LOOKS AT MODERN ARCHITECTURE



**M**ODERN-ARCHITECTURE is the offspring of Organic-architecture: an offspring, already emasculate and commercialized, in danger of becoming a Style. Having suffered many styles since Old Colonial washed up on eastern and Mission reappeared on western shores, this country takes over another one — this time the 58th variety — derived from its own exported Organic-architecture.

Organic-architecture was Middle West. Out of the "Cradle of Democracy" at the end of the nineteenth and the beginning of the twentieth century, came this new sense of architecture. Gradually, over a fifty-year period, a period of ambiguous acceptance and university adversity, it planted and established fertile forms and new appropriate methods for the natural (machine) use of steel, glass, plastics (like concrete) and provided more ample freedom in shelter for the free new life of these United States than any "style" had ever provided or even promised. Organic-architecture thus came of America — a new freedom for a mixed people living a

new freedom under a democratic form of life. Susceptible of infinite variety, it changed the proportions of building throughout the world. The Machine was dedicated to it. Grandomania dead of it — or dying.

Organic-architecture was definitely a new sense of shelter for *humane* life. Shelter, broad and low. Roofs either flat or pitched, hipped or gabled but always comprehensive Shelter. Wide flat eaves were sometimes perforated to let trellised light through upon characteristic ranges of windows below. Ornament was non-existent unless integral. Walls became screens, often glass screens, and the new open-plan spread space upon a concrete ground-mat: the whole structure intimate and wide upon and of the ground itself. This ground-mat floor eventually covered and contained the gravity-heating system (heat rises naturally as water falls) of the spaces to be lived in: forced circulation of hot water in pipes embedded in a broken stone bed beneath the floor slabs (soon misnamed "radiant-heat"). Other new



Part of the 1894  
Chicago scene,  
not by Wright



Bettman Archive

IN 1894, with this text from Carlyle at the top of the page — "The Ideal is within thyself, thy condition is but the stuff thou art to shape that same Ideal out of" — I formulated the following "propositions." I set them down here much as they were written then, although in the light of experience they might be stated more completely and succinctly.

I. Simplicity and Repose are qualities that measure the true value of any work of art.

But simplicity is not in itself an end nor is it a matter of the side of a barn but rather an entity with a graceful beauty in its

## FRANK LLOYD WRIGHT'S PROPOSITIONS OF 1894

### ORGANIC ARCHITECTURE LOOKS AT MODERN ARCHITECTURE

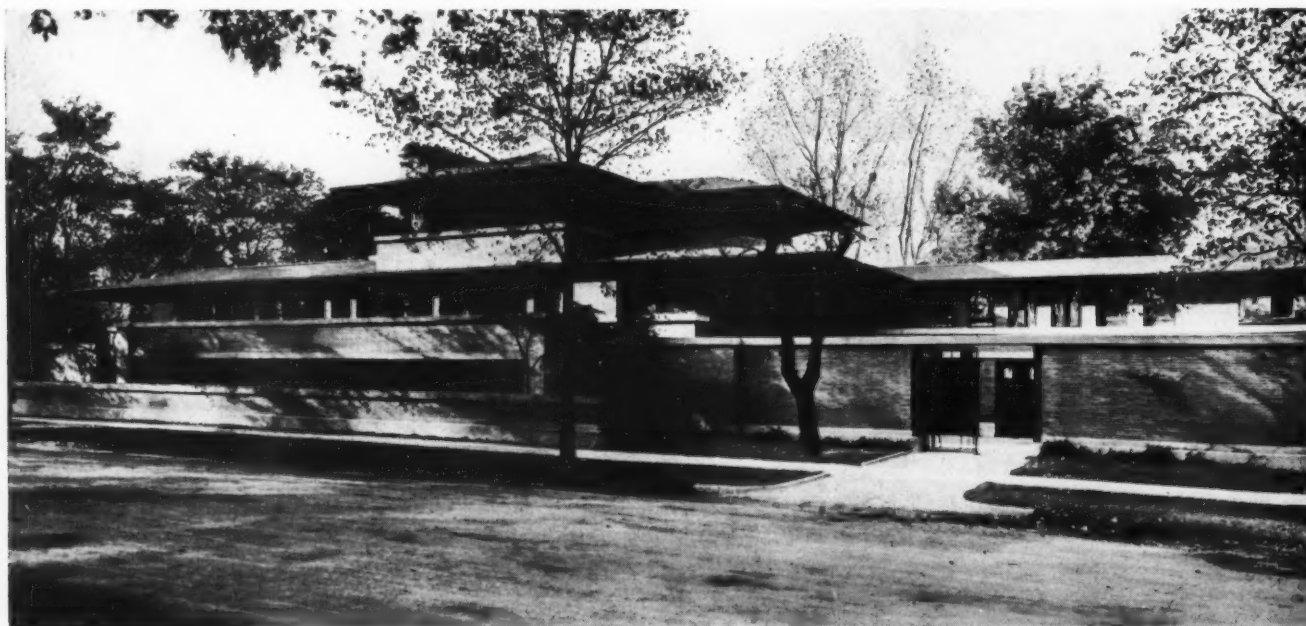
techniques, new forms adapted to our inevitable machine-methods appeared in these new structures. The economics of continuity and cantilever-structure were realized. Even the walls played a new role or disappeared. Basements and attics disappeared altogether. A new sense of space in appropriate human scale pervaded not only the structure but the life itself lived in it was broadened, made more free because of sympathetic freedom of plan and structure. The interior space to be lived in became *the reality of the whole performance*. Building, as a box, was gone.

The integral character of the third dimension was born to architecture.

Here came to America by way of its own architecture a natural concept of cultural human growth as an integrity comparable to growth of trees or a plant to grace the already disgraced landscape and liberate the individual from the sham of classicism.

By way of the integral quality of depth due to the third dimension and new sense of space as contrived by the new formulas of continuity and cantilever in devising construction, a new countenance emerged. The clear countenance of principle. The old post-and-beam formula was now too wasteful. Hard and clumsy, it seemed like a rattling of the bones. The cut-slash-and-butt construction of the old camouflaged box of the

Museum of Modern Art



Some critics have called this one of the best of Wright's early "prairie" houses — Robie house, Chicago, 1908

integrity from which discord, and all that is meaningless, has been eliminated. A wild flower is truly simple. Therefore:

1. A building should contain as few rooms as will meet the conditions which give it rise and under which we live, and which the architect should strive continually to simplify; then the ensemble of the rooms should be carefully considered that comfort and utility may go hand in hand with beauty. Beside the entry and necessary work rooms there need be but three rooms on the ground floor of any house, living room, dining room and kitchen, with the possible addition of a "social

office"; really there need be but one room, the living room, with requirements otherwise sequestered from it or screened within it by means of architectural contrivances.

2. Openings should occur as integral features of the structure and form, if possible, its natural ornamentation.

3. An excessive love of detail has ruined more fine things from the standpoint of fine art or fine living than any one human shortcoming — it is hopelessly vulgar. Too many houses, when they are not little stage settings or scene paintings, are mere notion stores, bazaars or junk-shops. Decoration is dangerous

Renaissance or otherwise seemed harsh or trivial. Ugly and false. Each organic building (an integument rather than a box) became as one with its site and occupancy. Nor could these buildings be imagined anywhere else nor for any other purpose whatever than where and for what they were built.

Thus by 1893–1900 a great negation transpired in America, entirely free of European influences. *But this sweeping negation was only the platform upon which to affirm* these new principles of life and economic building-construction. Naturally this negation had novel aesthetic aspects but wore the countenance of principle.

As a matter of course, these novel aspects of countenance were striking *effects*: startlingly clean, "streamlined" "effects." Soon these effects were elsewhere seized upon, in Germany particularly, where years later they appeared at the Bauhaus.

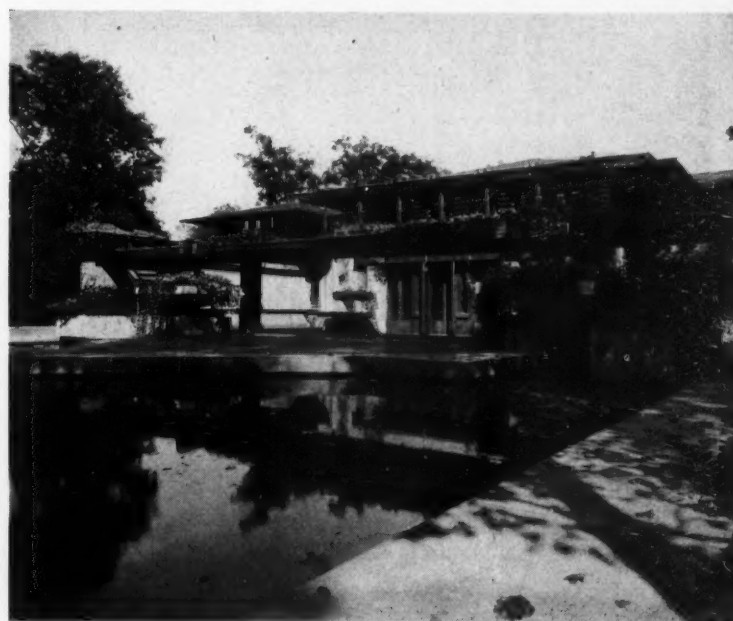
Organic-architecture as built in America during the years 1893 to 1909 was first extensively published in Europe by Germany, 1910, owing to the insistence of Professor Kuno Francke, "Exchange Professor of Aesthetics" at Harvard. (It had been published in England years before.) Reaching Paris soon, it there became, by way of journalistic ability and our own provincial museums, again the Box. But, the box nude! Duly dedicated to Machinery.

The original and elemental affirmative characteristics or the original negation made by Organic-architecture in three dimensional structure, *the Machine dedicated to it*, now reappeared as a bare two-dimensional facade *dedicated to the Machine!* The streamlined novelty of the original negation became thus a fit fad for Fascism. But our provincials began to import it because the culture-mongrel of our country and our museums believes, and will continue to believe, that American "culture" is a bastard. "Culture comes from Europe."

Well, this import was not an affair of construction at all but a mere "aesthetic," a painter's, not an architect's. Soon a cliché. The fruitful *affirmative negation*

made by Organic-architecture in three dimensions now reappeared as a two-dimensional affair. *All* ornament was scraped off. A high box would be contrasted with a long low box or square boxes were placed together alongside very tall boxes. Or on came the nude box cut open or set up in the air on posts without pants. But always, nevertheless and notwithstanding — the BOX. Thus surfaced the box was invariably painted white to emphasize the fact that it did not intend being a becoming feature of the ground upon which it was put. By maintaining a white sepulture for unthinking mass-life, individuality was soon leached from the performance. Otherwise no such cliché could have been made so useful

Museum of Modern Art



A prairie house with a pool — the Coonley House, Riverside, Illinois, circa 1910

unless you understand it thoroughly and are satisfied that it means something good in the scheme as a whole, for the present you are usually better off without it. Merely that it "looks rich" is no justification for the use of ornament.

4. Appliances or fixtures as such are undesirable. Assimilate them together with all appurtenances into the design of the structure.

5. Pictures deface walls oftener than they decorate them. Pictures should be decorative and incorporated in the general scheme as decoration.

6. The most truly satisfactory apartments are those in which

most or all of the furniture is built in as a part of the original scheme considering the whole as an integral unit.

II. There should be as many kinds (styles) of houses as there are kinds (styles) of people and as many differentiations as there are different individuals. A man who has individuality (and what man lacks it?) has a right to its expression in his own environment.

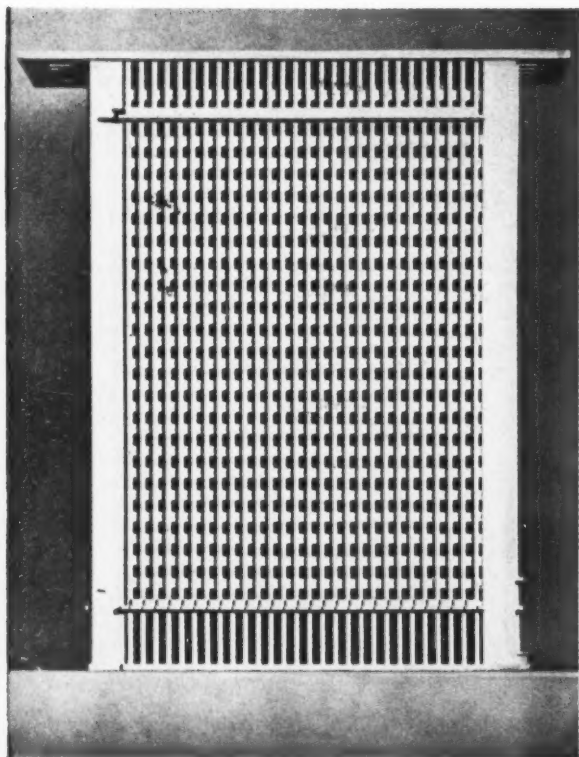
III. A building should appear to grow easily from its site and be shaped to harmonize with its surroundings if Nature is manifest there, and if not try to make it as quiet, substantial and organic as She would have been were the opportunity hers.

## FRANK LLOYD WRIGHT'S PROPOSITIONS OF 1894

### ORGANIC ARCHITECTURE LOOKS AT MODERN ARCHITECTURE

to our American mass-education or serve our standard practice of quick commerce.

This sterilizing performance was duly dedicated to machinery, as any cliché should be, not *machinery dedicated to it* as in Organic-architecture. So, here came a kind of tapeworm into the entrails of Organic-architecture. Because of the novel effects of the original organic negation made for organic purposes this mixture of negation with negation is, as of today, what is called "Modern-architecture."



Project, never built, for an office building in San Francisco, done by Wright in 1912

Any two-dimensional cliché is too easy to commercialize or teach. To educationists and the commercial capitalist it was providential — just what both wanted because so shallow an affair of surfaces. The Box now, sometimes of glass, say, but always a post-and-beam affair even if not rattling its bones, became more and more evident in standard education. Buildings began gradually to appear intermixed with the "effects" of Organic-architecture — to be now called "Modern-architecture."

The imported cliché was not only easy to teach. "Less is more" unless less, already little, becomes less than nothing at all and "much ado about nothing."

Now, because of a much too shallow aesthetic (a painter's), the original affirmative negation made by Organic-architecture (an architect's) seems too soon in danger of losing, under the name of Modern-architecture, its humane characteristics and original poetry. Confused with architecture superficially fashioned in two dimensions we have a superficial imitation of the original profound negation made by Organic-architecture itself.

Easy to practice, easier still upon the resources of human science and imagination, the Box, ornamental camouflage (the "Classic") scraped off — *but old thought unchanged* — again rises — educational and fashionable: The cliché of a new STYLE!

Regardless, the old box comes back. The crate now consecrate.

In it we see high and low purposes all packaged or banked alike.

Architectural careers thus become quick. The true amateur, sterilized owing to this revival of the box-facade by accredited schools — and names — is thus made "safe." Grateful for this sterilization, if for no other reason, our leading universities together with realtor "developers" and our swelling bureaucratic government are all ready to "take over" "Modern-archi-



We of the Middle West are living on the prairie.\* The prairie has a beauty of its own and we should recognize and accentuate this natural beauty, its quiet level. Hence, gently sloping roofs, low proportions, quiet sky lines, suppressed heavy-set chimneys and sheltering overhangs, low terraces and out-reaching walls sequestering private gardens.

IV. Colors require the same conventionalizing process to make them fit to live with that natural forms do; so go to the

*\* In this I had in mind the barren town lots devoid of tree or natural incident, town houses and board walks only in evidence.*

Belton Archive



Another pre-Wright vision of Chicago

ecture." It goes everywhere the educational institution and especially the Museum happens to be or to go. The Museum-as-Education and Education-as-the-Museum have found just what could easily be handled in the name of culture: culture must come from abroad! That is where the cliché came from.

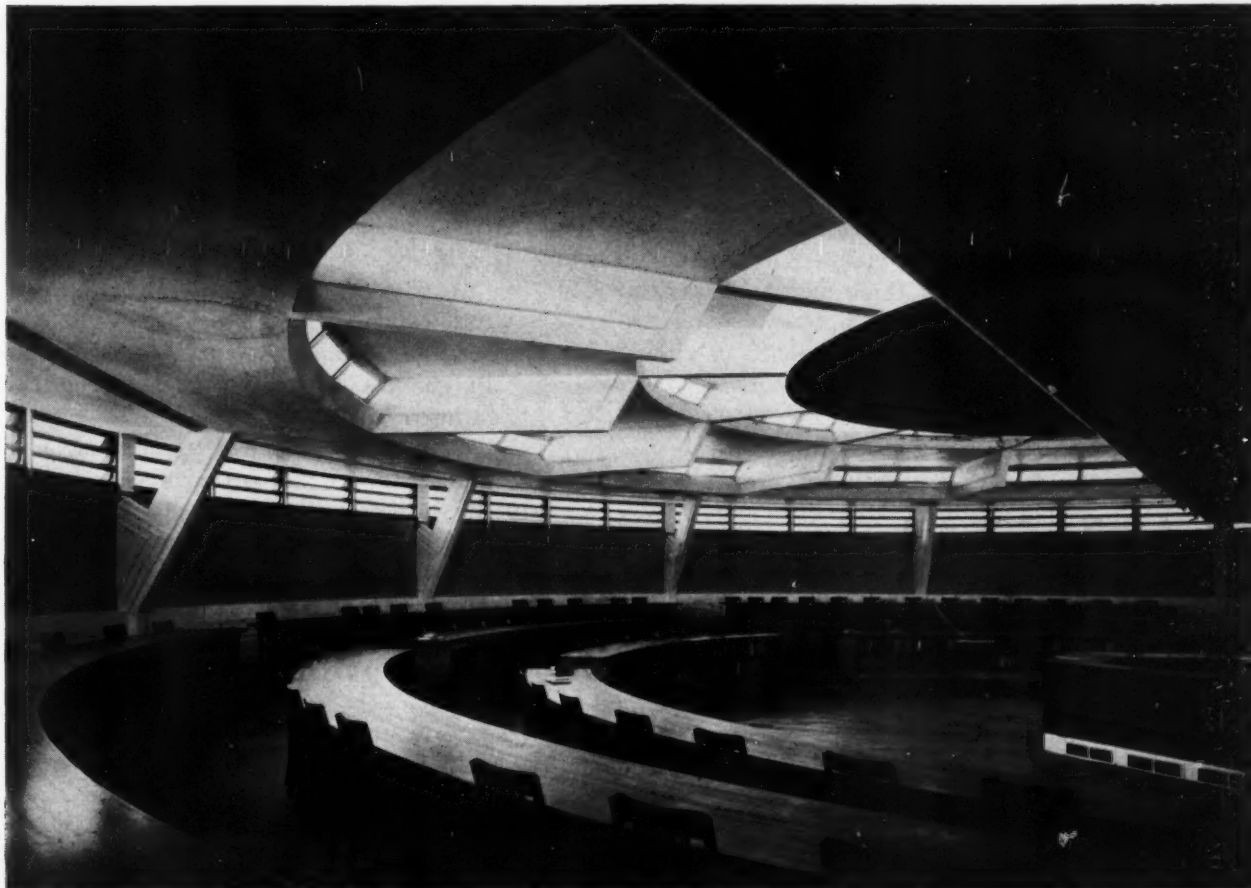
Now, the moral nature of the Cuckoo (to be sure) characterized much if not most of the ambitious subscribers to this go-getter rush for the band-wagon. Any honest aspirant had small chance of recognition and none

of genuine success. Any aspirant, tough or callow, could more easily exploit the Box bare than take time and pains to go deeper into the principles of Organic-architecture.

Organic-architecture based upon fundamental human and structural principles insisted upon *integral method and always significant form true to structure throughout. Or none.* It was profound — too slow for popular purposes. Therefore preparation for architectural practice would

Interior of circular library, Florida Southern College, Lakeland, Fla.

Ezra Stoller



woods and fields for color schemes. Use the soft, warm, optimistic tones of earths and autumn leaves in preference to the pessimistic blues, purples or cold greens and grays of the ribbon counter; they are more wholesome and better adapted in most cases to good decoration.

V. Bring out the nature of the materials, let their nature intimately into your scheme. Strip the wood of varnish and let it alone — stain it. Develop the natural texture of the plastering and stain it. Reveal the nature of the wood, plaster, brick or stone in your designs; they are all by nature friendly and beautiful. No treatment can be really a matter of fine art when these

natural characteristics are outraged or neglected.

VI. A house that has character stands a good chance of growing more valuable as it grows older while a house in the prevailing mode, whatever that mode may be, is soon out of fashion, stale and unprofitable.

Buildings like people must first be sincere, must be true and then withal as gracious and lovable as may be.

Above all, integrity. The machine is the normal tool of our civilization, give it work that it can do well — nothing is of greater importance. To do this will be to formulate new industrial ideals, sadly needed.

## FRANK LLOYD WRIGHT'S PROPOSITIONS OF 1894

### ORGANIC ARCHITECTURE LOOKS AT MODERN ARCHITECTURE

be not only slow but far too difficult. Also, a discerning client was needed rather than a fashionable one. There are still a few discerning ones developing in America.

Being truly individual, Organic-architecture lacked the journalist. America is nothing if not journalistic.

Writing as of 1952, the old Box — undressed — seems coming back again. The white-paint-men thrive on choice ways of setting it up on top of the ground. Regardless. They set it up tall, endwise; put it over there, down crosswise. Set it on the bias? Likely enough set it up on top of posts or anything else. Soon they will pivot it. Tyros slash and stripe its fascistic facades horizontally or vertically or checker-wise the fronts. Soon diagonally? They stamp it to look thick or stamp it to look thin: put lids on it — or none. Lids either square or askew, projecting or flush. The professors make a drum of it and beat it for dismal accord with the soulless character of an Era.

Thus Modern-architecture is Organic-architecture deprived of a soul. Therefore architecture is now so easy to grasp that any boy of three months' experience can practice it and appear with a dose of it on the front page of the local newspaper next month, or within a year (or two) be heralded in color by the market-magazines of building-materials as the new "It." The "plan-factory" now has shows in Art-Museums.

I fear the history of creative art down the ages thus repeats itself in our own modern times and again we have categories of names. Names! But now names all essentially *unlike* for performances as *alike* as any two peas.

So this is Modern-architecture! Well — if so — this affair, too, will pass as matter of intelligent choice. St. Augustine once observed, "The harvest shall not be yet." Perhaps what is left behind when we sicken of it all will be better (I so believe) than what came of similar betrayal of principles in times past. Better, because of

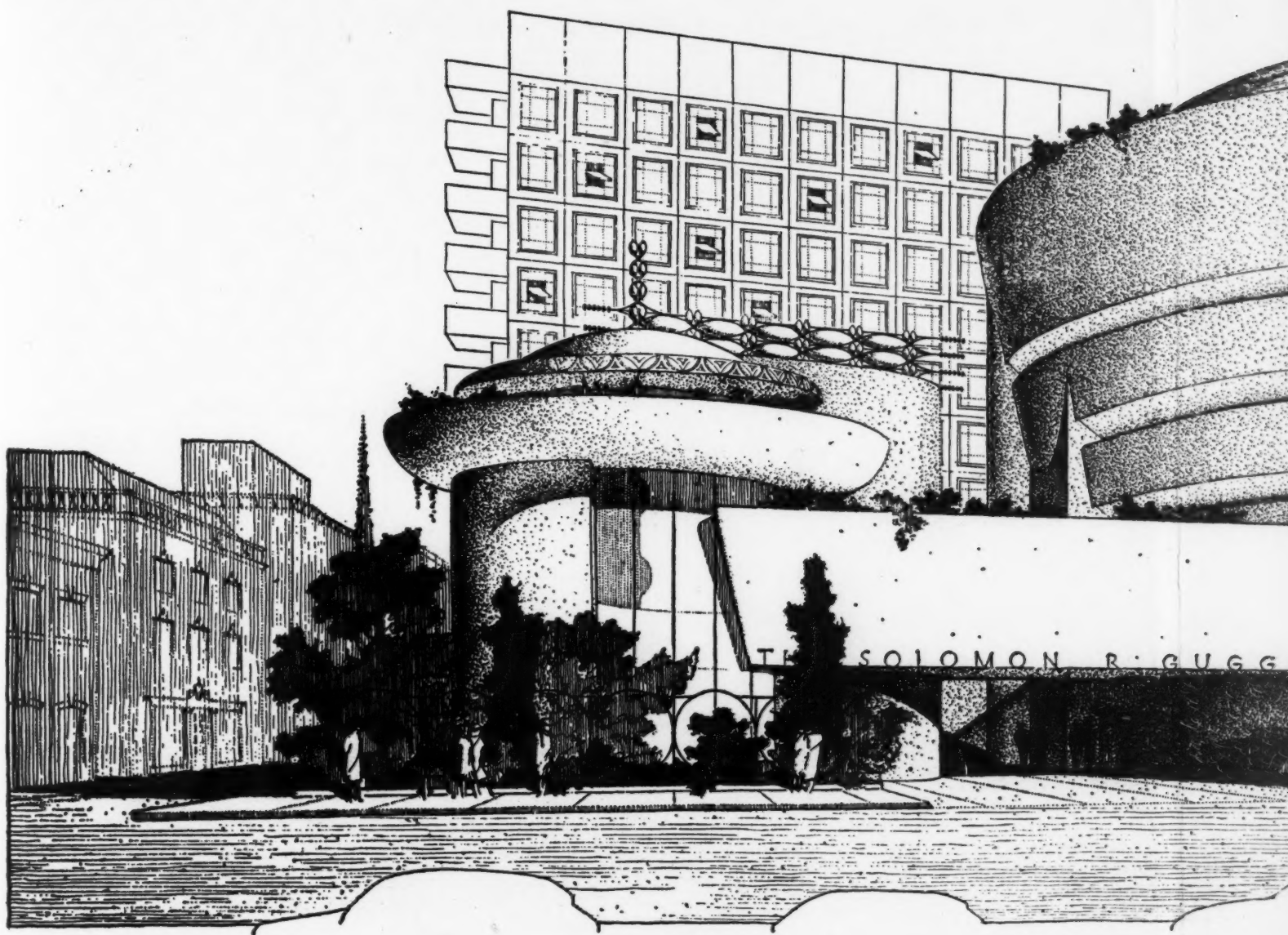
what is left of the character of integral form and proportion — the plastic humanitarian space in building which Organic-architecture has already made. Probably the humanly significant forms belonging to Organic-architecture now camouflaged or betrayed and called "modern" will come back from the gutter of Fashion toward which they now seem headed: come back and — deepened by experience — start all over again.

The timeless war of Principle with Expediency will go on and on, in our country especially, because more than ever human nature here is habituate. Like vegetation. Or the parasite. To really change human habituation (even to the cigarette degree) would require more than one try in any one century. While nailing up a box in different ways is so easy, why should a Get-rich-quick Society like ours take time and the extreme pains necessary to make an organism of anything? A cultural organism (like any other true organism) must *grow*. Growth is slow. It cannot be had like a box nailed up by the tyro internationally. The answer is yet to come.

Any "international style" would probably be a cultural calamity fit for Fascism but intolerable to democracy. Meantime so-called "Modern-architecture" runs the gamut of the old Box stripped and trying to assume forms originated by Organic-architecture. As this pretentious shell, empty of true organic significance, goes rapidly toward the gutter of fashion — let us observe . . . "there goes to the gutter the architecture of this modern era from which succeeding generations will probably perceive what was missed and begin to build again on the basis of what was lacking when the gutter was reached."

I hope. And I believe.

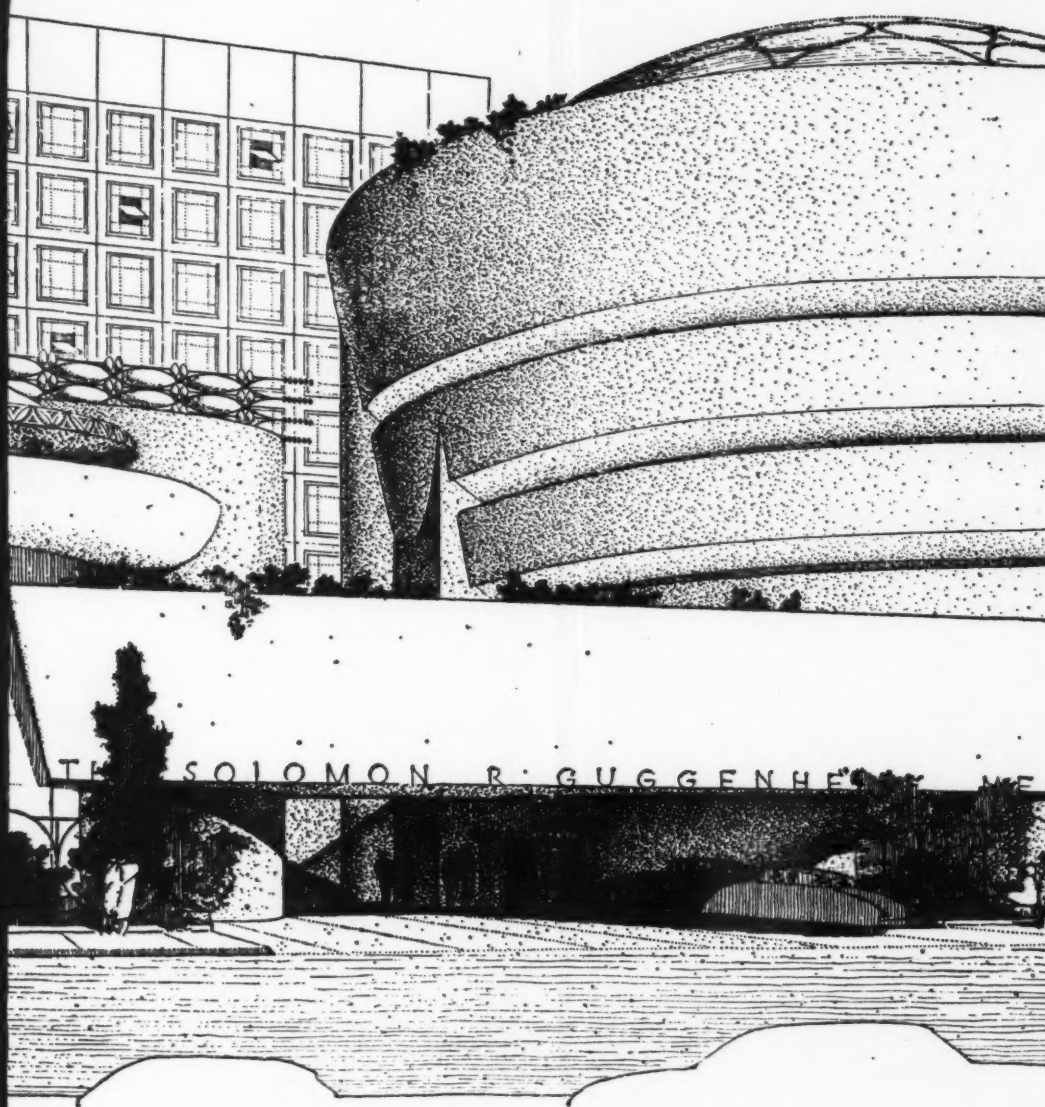
Frank Lloyd Wright — Taliesin West — February 1952



THE MODERN GALLERY

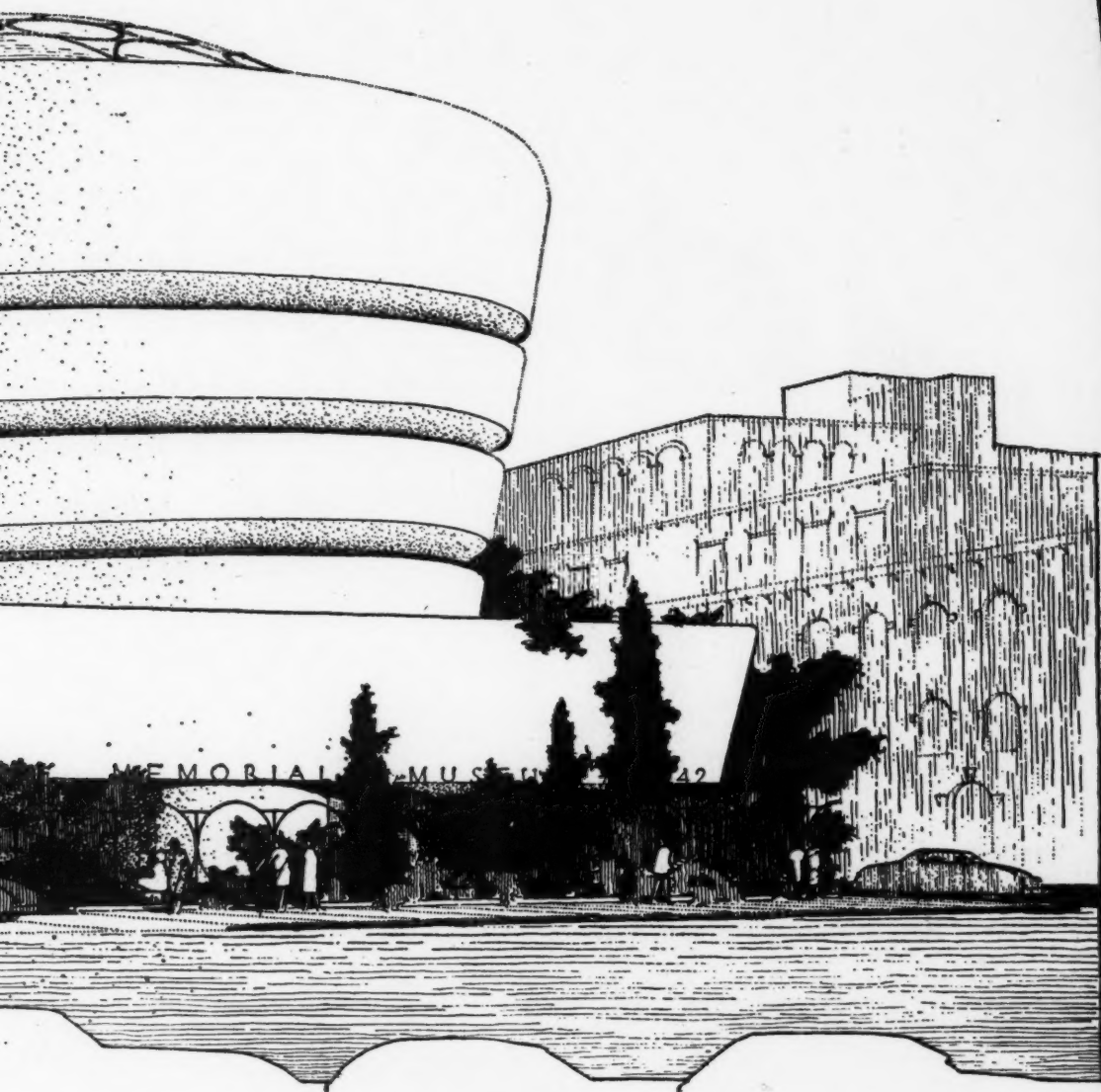
MEMORIAL MUSEUM FOR THE SOLOMON R. GUGGENHEIM FOUNDATION





THE SOLOMON R. GUGGENHEIM FOUNDATION

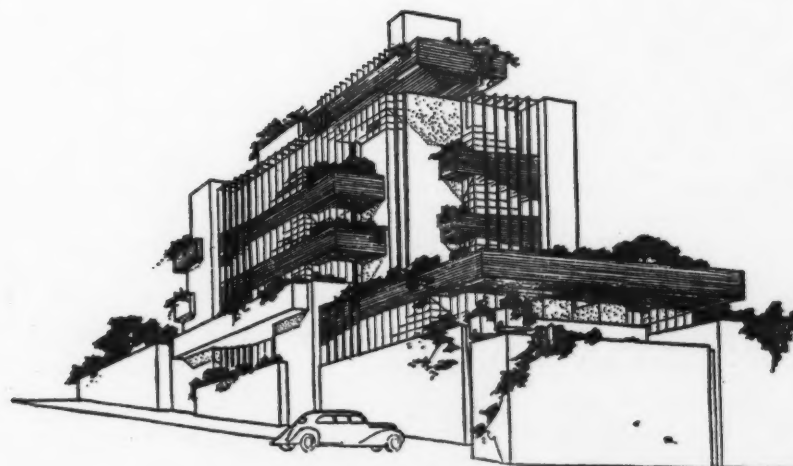
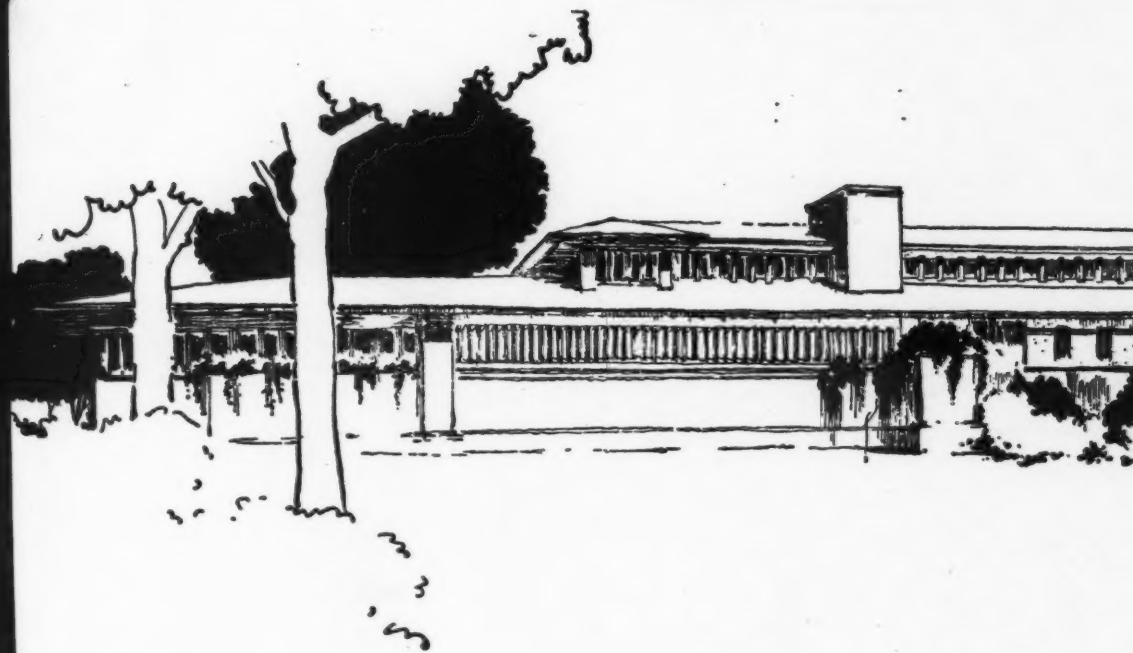
FRANK LLOYD



FRANK LLOYD WRIGHT ARCHITECT



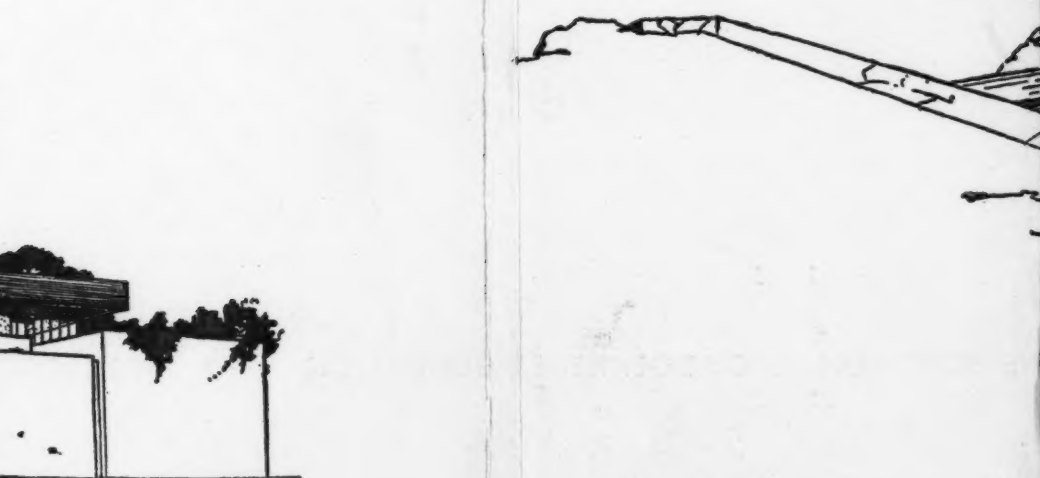
It was Wright's ability to draw that earned him  
attention from Louis Sullivan, his first job with A  
and Sullivan, then doing the Chicago Auditori  
Here are some early drawings, and some later o



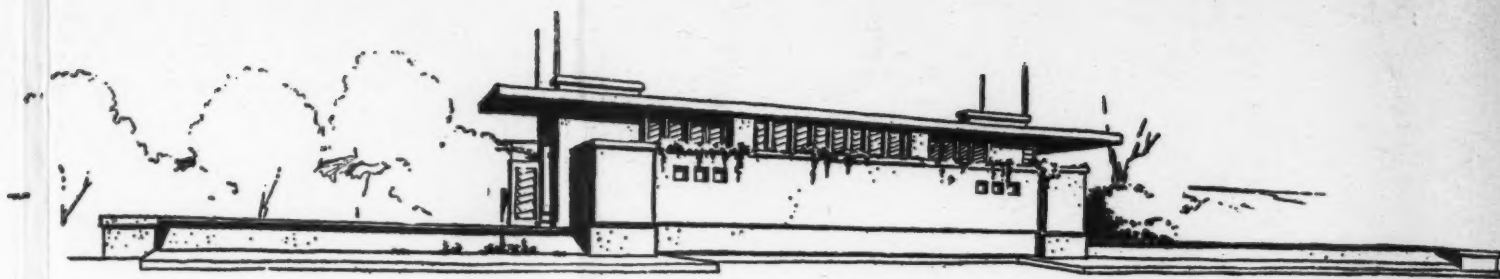
*Elizabeth Noble Apartment House, Los Angeles*



at earned him his  
first job with Adler  
Chicago Auditorium.  
and some later ones



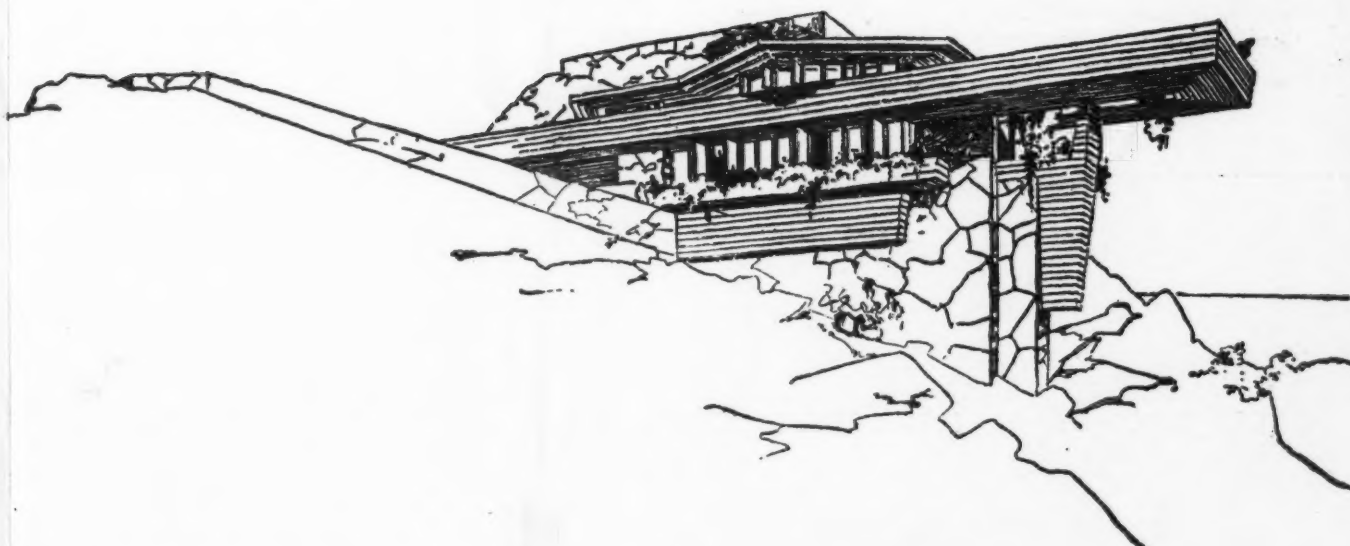
use, Los Angeles 1929



Yahara Boat Club, Madison, Wis. 1902



Pavilion at Banff 1911



Arch Obeler House, Los Angeles 1940

# PORTOLA JUNIOR HIGH SCHOOL

*El Cerrito, Calif.*

*Miller & Warnecke, Architects*





R. L. Copeland (air view)



## PORTOLA JUNIOR HIGH SCHOOL

**P**ORTOLA Junior High School is a departure from the usual recent California school. It has not a finger plan because its 11-acre site slopes steeply to the west (overlooking San Francisco's Golden Gate) and hardly provides room for the buildings and recreational spaces its 1500 students require. Hence the classroom building is a two-story structure with a basement which is fully exposed and utilized on the downhill side. Two shop buildings and a gymnasium are at successive lower elevations, and the relatively flat area at the bottom of the site contains three playgrounds.

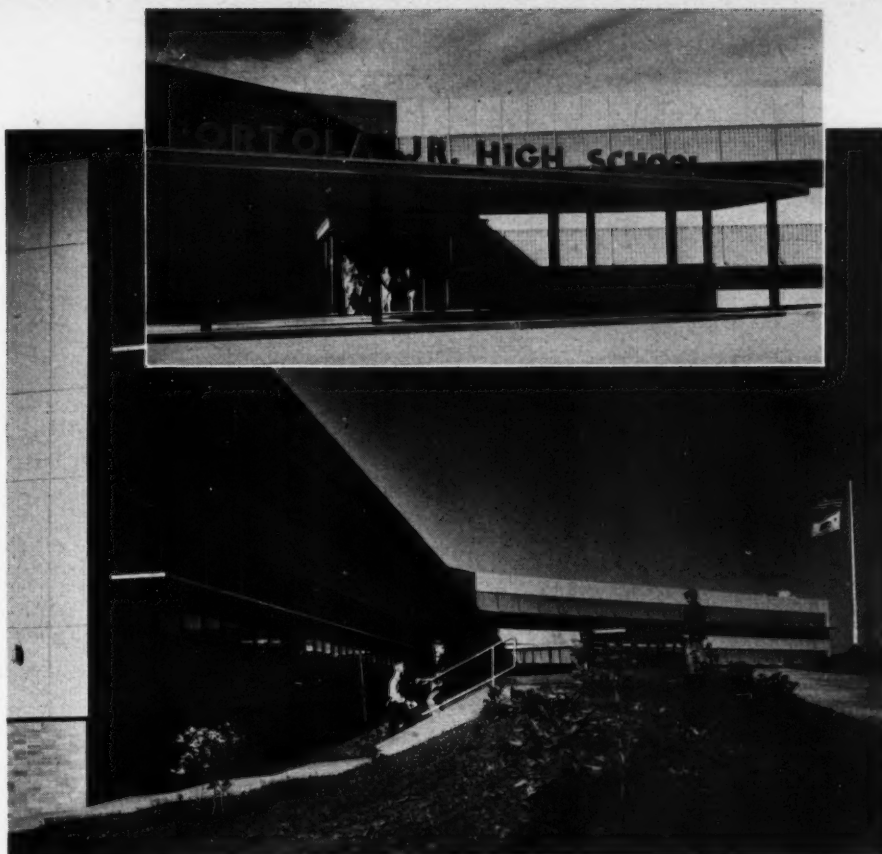
This solution of the site problem required the classroom building, a long, flattened V in plan, to have east and west exposures for all classrooms, which meant that sunlight control was essential. In both exposure and use of glass block the school is also an exception to California practice. Architect John Carl Warnecke made tests of the fenestration system in an actual local installation before it was accepted. Eckbo, Royston & Williams were the landscape architects; Hall & Preg-noff, structural engineers; G. M. Simonson, mechanical and electrical engineer. Total cost was \$1,560,000.00 or \$12.20 per sq ft.

R. L. Copeland (air view)

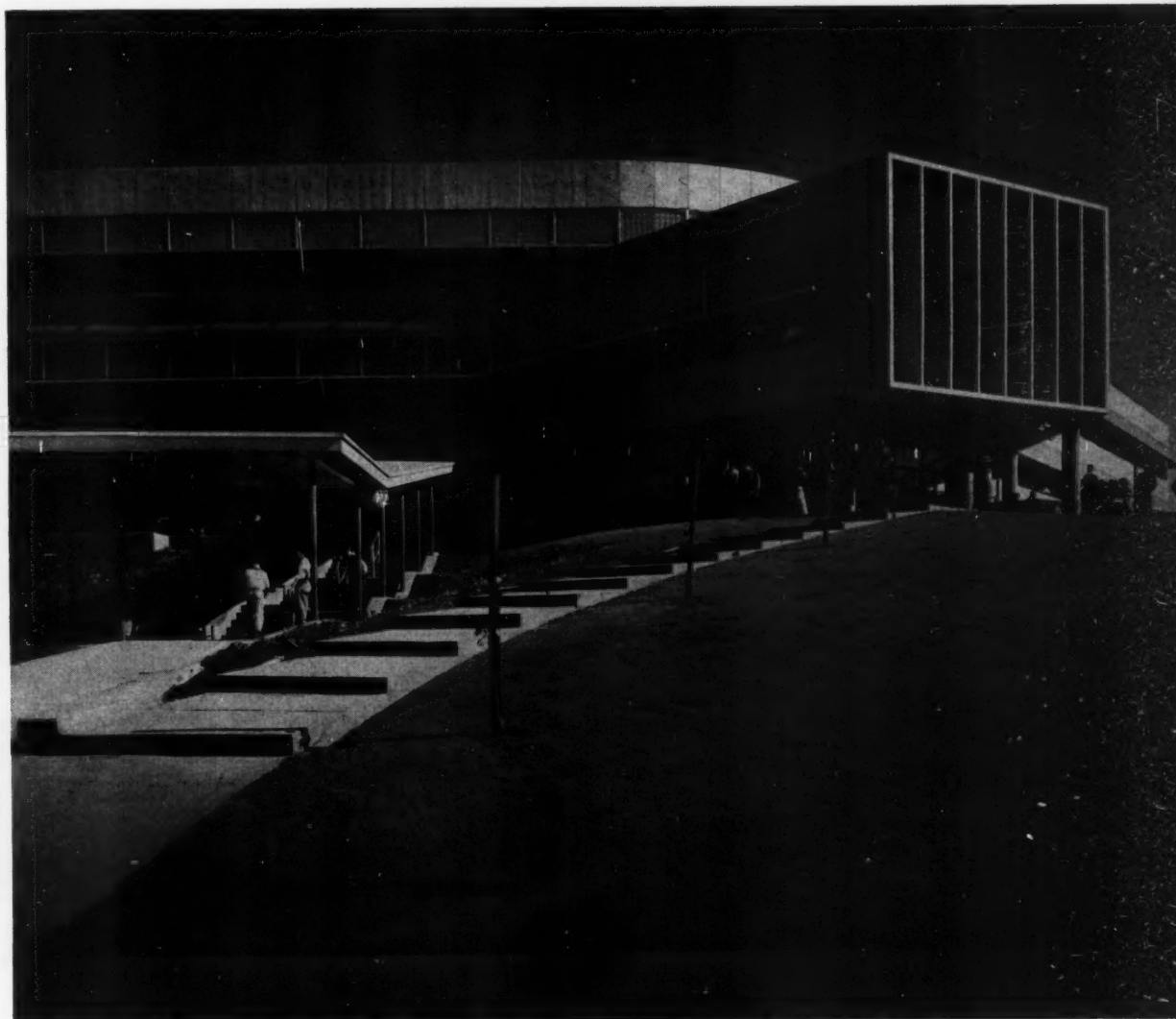


East side of Portola Junior High School, at top of sloping site, is main approach. Construction is reinforced concrete for all buildings. Exterior walls are painted above the brick-veneered basement. Interior walls are plaster, with tile in toilets and corridors. Floors are asphalt tile; ceilings, acoustic tile; fenestration, projecting sash with metal sunshades and glass block; heating, radiant floor panels in classroom building, warm air in gymnasium and shops. Lighting is incandescent in classrooms, fluorescent in shops

Julius Shulman



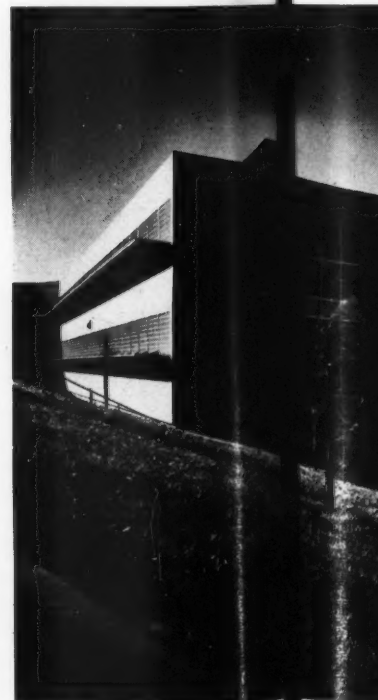
Julius Shulman





**PORTOLA JUNIOR HIGH SCHOOL**

*Downhill side of basement floor contains cafeteria (above), library (below) and similar areas. Unfortunately the placement of gymnasium building somewhat limits the superb view from the cafeteria, although the Golden Gate can be clearly seen from classrooms on upper floors*





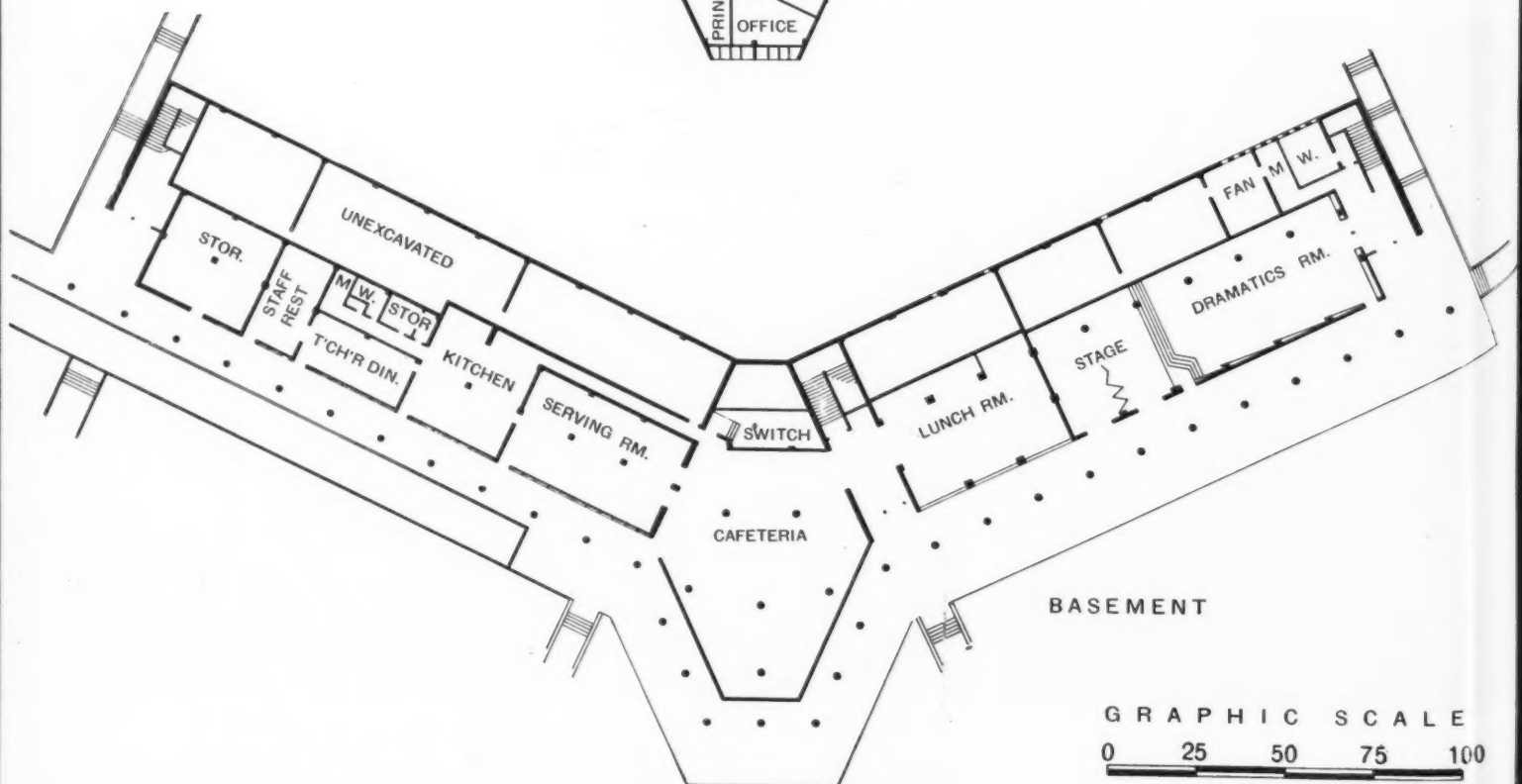
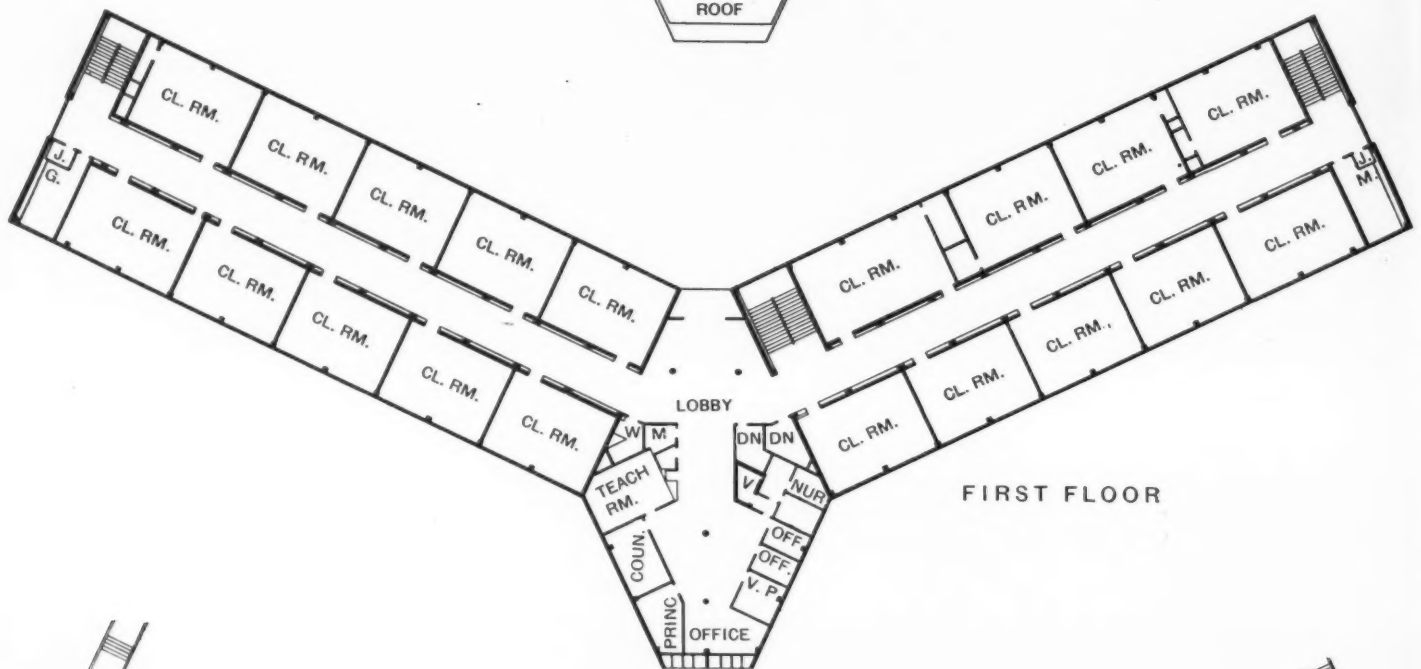
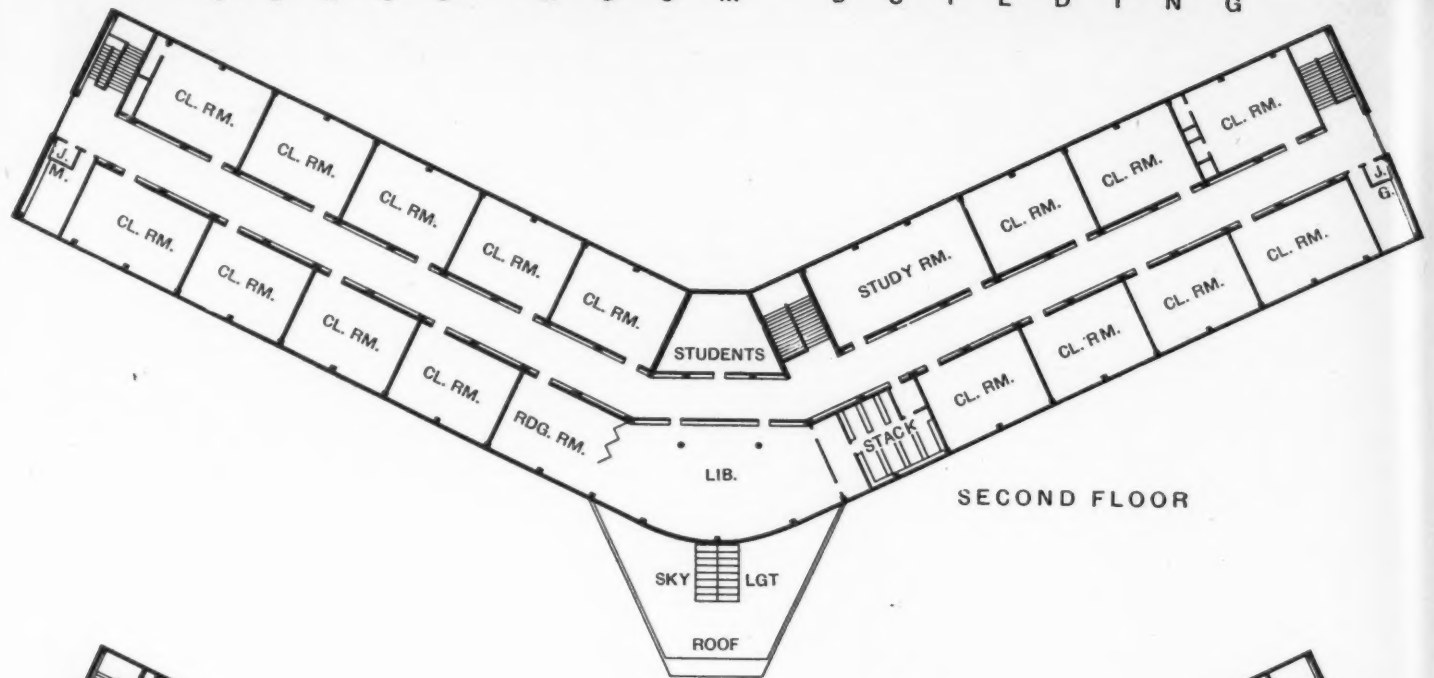


Julius Shulman photos

Of the two shop buildings, both with sawtooth monitor skylights, the one shown above contains art and domestic science rooms (see interior below) and is called the Laboratory Building. All buildings are connected by stepped paths and roofed walkways



# CLASS ROOM BUILDING



GRAPHIC SCALE  
0 25 50 75 100

# PORTOLA JUNIOR HIGH SCHOOL



Julius Shulman

In classroom building, double-loaded corridors serve 36 classrooms, library, administration suite. Photo above: circular desk in center of administration unit; right, top-floor corridor; below, typical classroom. Rooms facing west have cool colors, blue or green chalkboards; east rooms, warm tones and brown boards



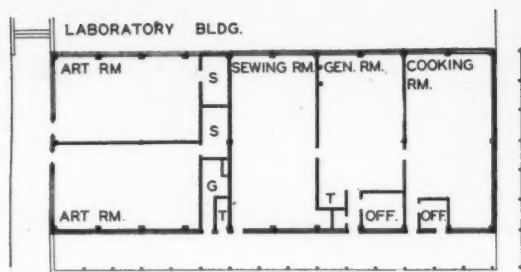
Rondal Partridge

Julius Shulman



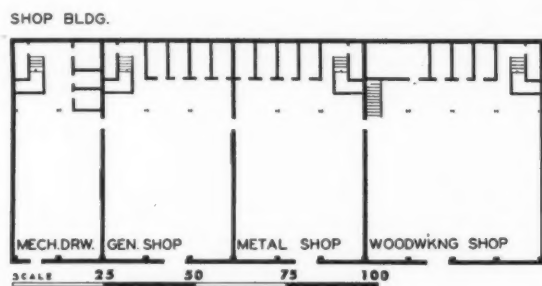


## PORTOLA JUNIOR HIGH SCHOOL



### SHOP BUILDINGS

Plan of domestic science and art building is above; photos are on preceding pages. Below is plan of industrial arts shop; photo at right. Horizontal vanes control light at east and west windows. Monitor skylights face north

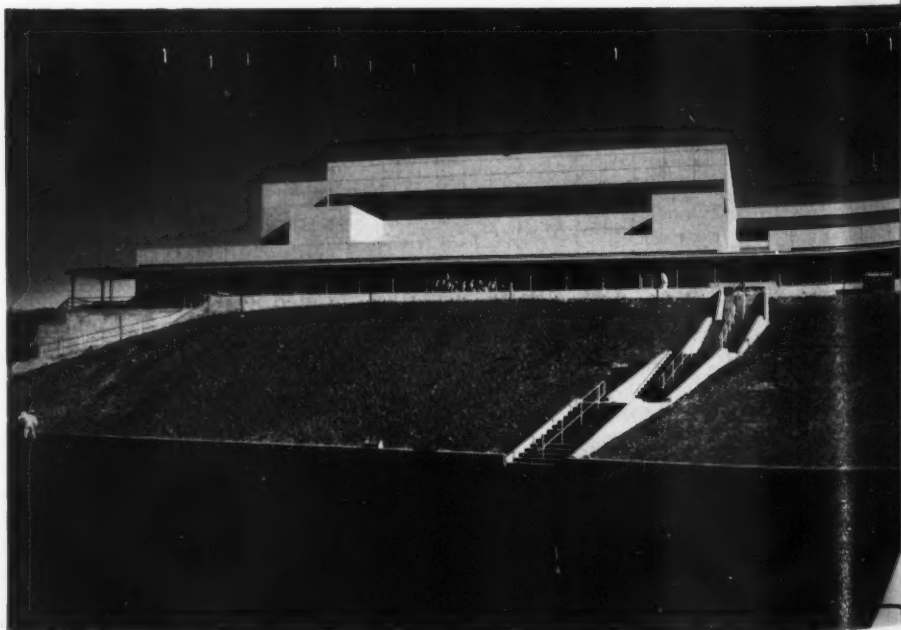


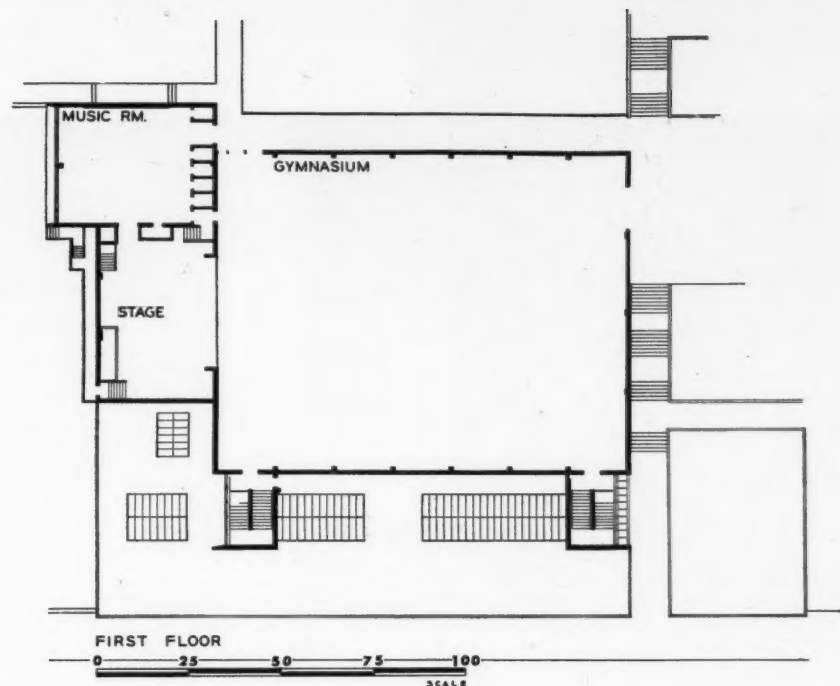
Rondal Partridge

### GYMNASIUM

The gymnasium building at Portola has a stage so it can be used as an auditorium, and an adjoining music room which can also serve as an anteroom to the stage. Here, and in the dramatics room in the classroom building as well, the stage is fully equipped. A complete, multi-use public address system permits programs in gymnasium and dramatics room to be heard in all classrooms

Julius Shulman

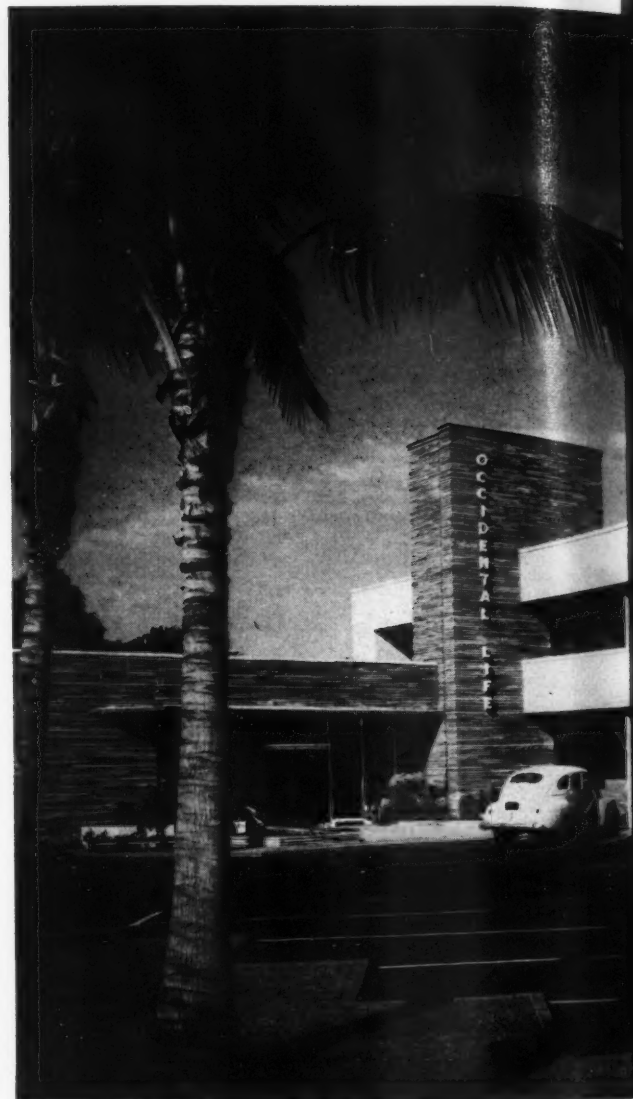




*Plan shows only the main floor of the gymnasium building. The lower floor contains boys' and girls' locker rooms, showers, a community room, and a boiler room for the entire school. Gymnasium has both glass block panels and a skylight. All skylights are of aluminum, puttyless, glazed with heat-absorbing wire glass*

Rondal Partridge





## INSURANCE COMPANY OFFICES IN HONOLULU, T. H.

*Security Insurance Agency, Ltd., Agents for  
Occidental Life Insurance Company of California*

*Cyril W. Lemmon, Architect; Douglas Freeth, Associate  
Ernest H. Hara, Associate Architect*

*Thompson and Thompson, Landscape Architects*

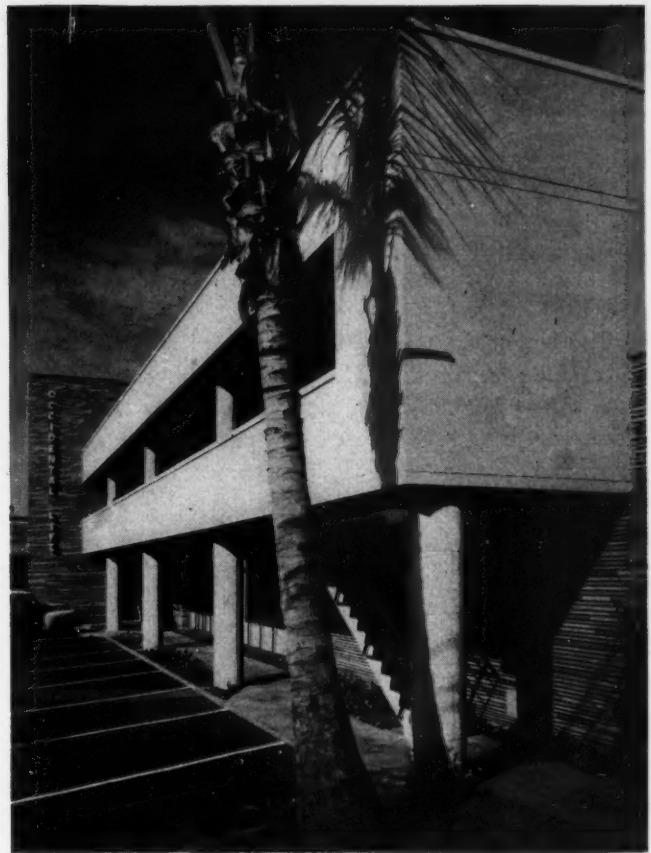




R. Wenkam

WHILE THIS BUILDING was in the early planning stage the architects made a careful analysis of the office needs of the 40 agents on the staff. Individual desks were ruled out: they would have required an area of about 2400 sq ft, in use for only a small part of the day. The owners recommended a series of conference tables to which the agents could take their documents and papers from individual filing cabinets; this idea was vetoed by the architects because a large room full of unused conference tables "could easily be somewhat institutional in appearance," and because the large tables would have been in the way when the space was needed for general meetings.

The solution to the problem was based on the fact that, except in rare instances, not more than eight or



Main entrance (opposite page) faces landscaped parking area, at each end of which are stairs leading to lanai connecting second-floor offices. Building is reinforced concrete with exterior walls of Arizona sandstone and plaster

ten agents would need desk space at the same time. Eight reference tables were ranged along the wall of the corridor leading to an agents' lounge. The tables are for reference only, and do not have drawers — the architects reasoned that this would prevent an agent from staking a claim to a particular table, and would force him to return his papers to his own individual file. If more than eight agents need reference space at one time, the large table in the school room at one end of the lounge can be pressed into service.

For discussions between agents and their clients, the architects felt strongly that an informal and friendly atmosphere must be provided. Hence the large and airy lounge where several agents may hold conferences at the same time. With the furniture rearranged and sup-

## INSURANCE BUILDING

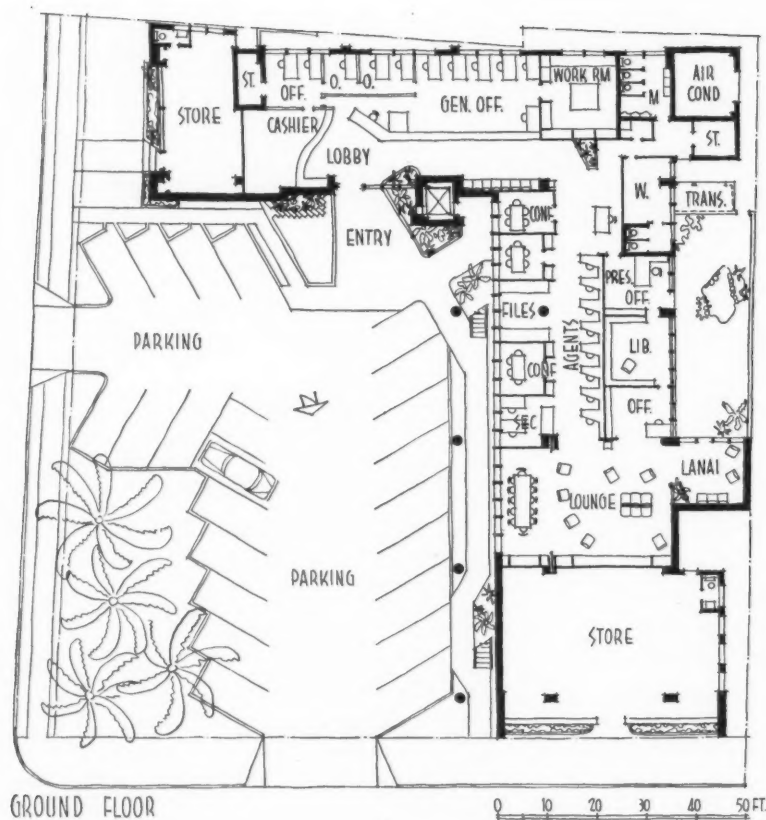
plemented by folding chairs (stored in cabinets along the wall), the lounge can be converted to a meeting room with a seating capacity of 110. Three small conference rooms, a file room and a secretaries' office are also provided.

The balance of the ground floor is given over to private and general offices, lobby and a library. Doctors' and dentists' offices and a laboratory occupy the second floor. Stairs at each end of the parking area, and an elevator adjacent to the main entrance, lead to a lanai-corridor serving the entire second floor.

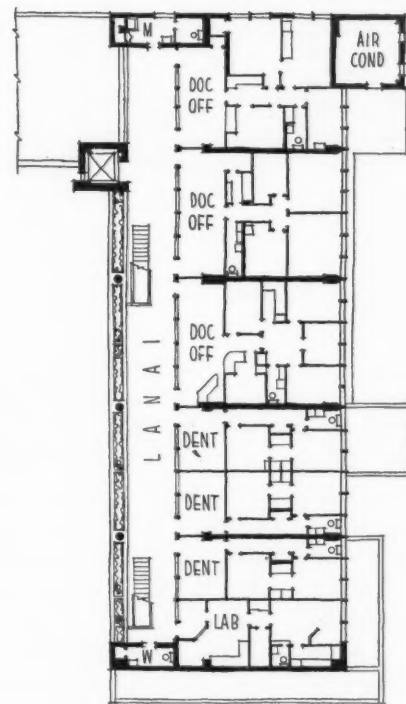


R. Wentham

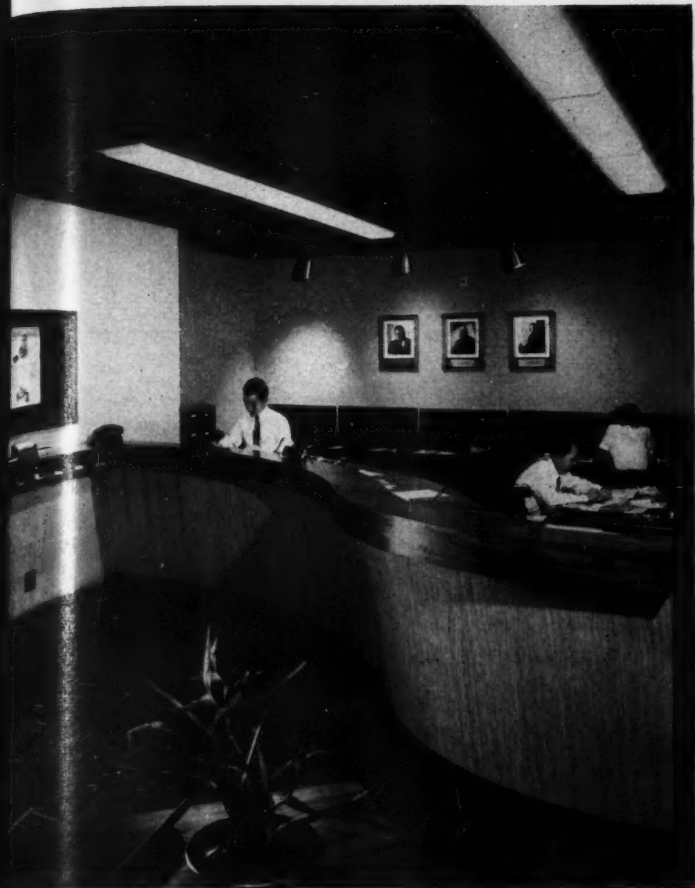
Switchboard-reception desk faces main entrance



GROUND FLOOR



SECOND FLOOR



Above: left, cashier's desk; right, general office

Below: agents' tables, secretaries' office and phone booths





## INSURANCE BUILDING



R. Wenkam

*Above, left: another view of agents' quarters with lounge in background, president's office at left. Above, right: president's office has own small reception area. Below, left: school at end of agents' lounge can be closed off by folding doors, or left open for agents' use. Below, right: reference tables do not have telephones; instead, sound-proofed telephone alcoves are provided outside adjacent conference rooms*





## EXPANDABLE PLANT FOR GROWING FIRM

*Manufacturing Unit for The Powers Regulator Company*

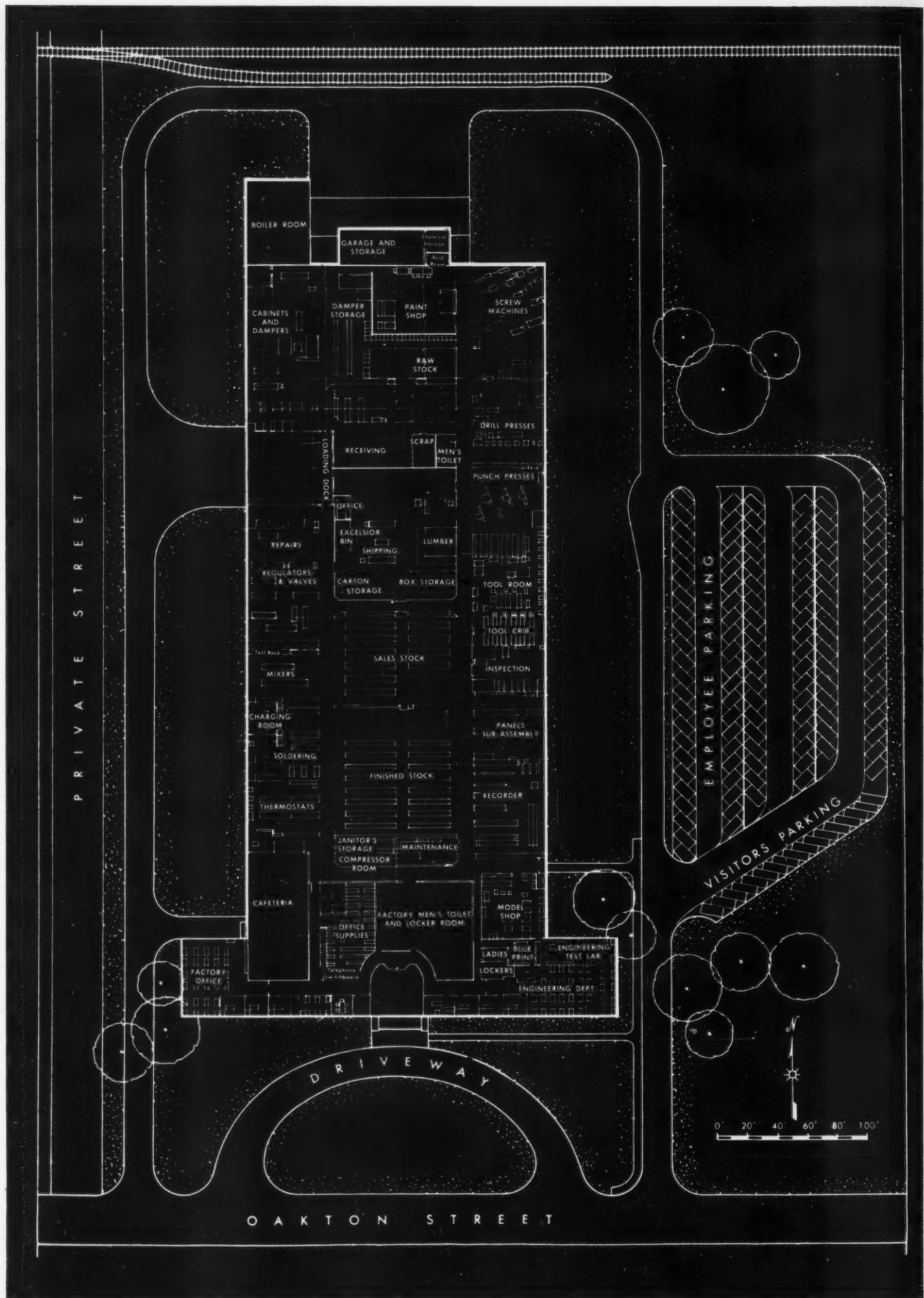
*Skokie, Illinois*

*Sessions Engineering Company, Architects and Engineers*

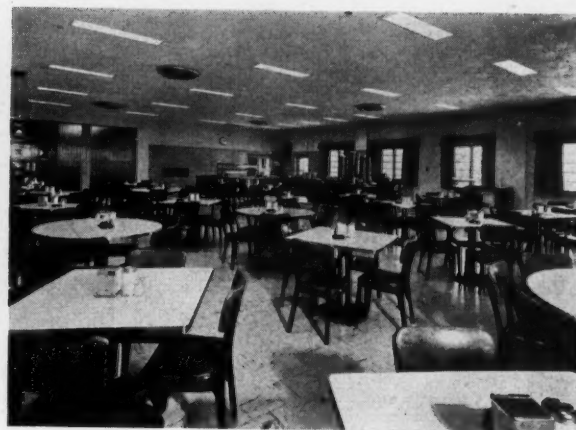
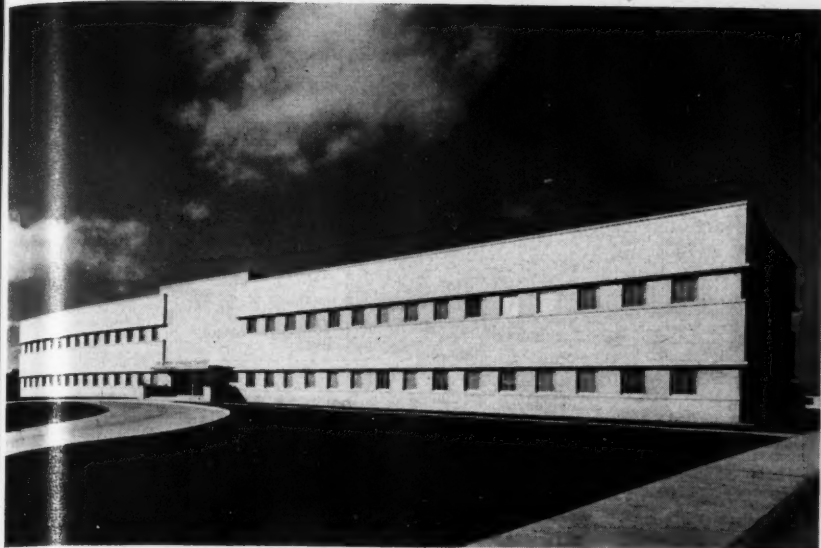
**A** PRIME CONSIDERATION in the design of this plant was provision for expansion. In 1940 and again in 1943 the company — manufacturers of air conditioning, heating and ventilating controls — had added materially to its facilities; a few years later both office and factory space were again insufficient.

The new plant was planned to allow relatively easy factory expansion without disturbing the office layout. The building is T-shaped, with a 290-ft-long two-story office and laboratory section across the front. The fac-

tory section is one story in height, 200 ft wide by 460 ft long. Manufacturing departments are located around the outside walls, and are fed from the storage areas in the center of the plant. Truck docks are adjacent to the shipping department and stock rooms. Work and material flow problems were studied with three-dimensional scale models of all plant equipment, placed on a large-scale floor plan; staff members could visualize their departments before the plant layout was approved, and were able to help actively in the planning.

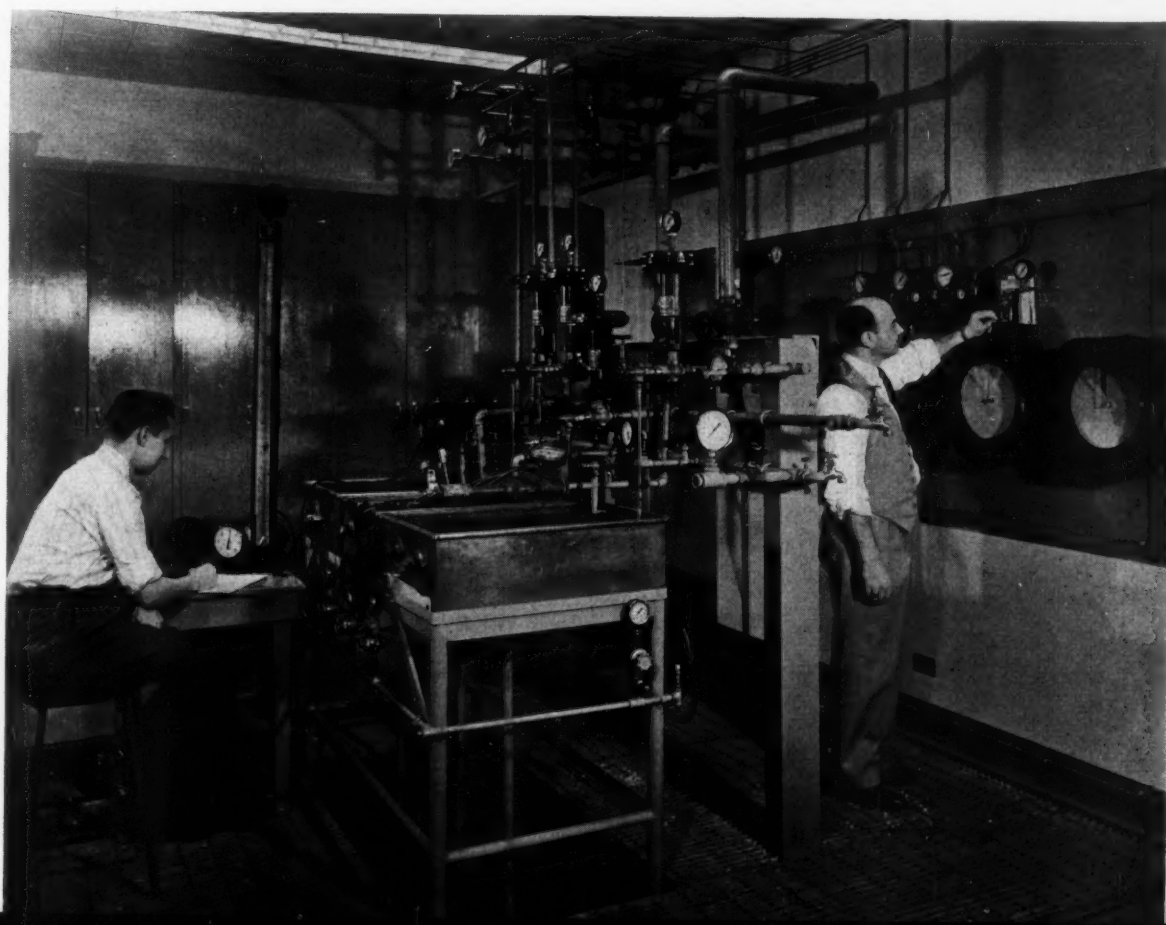






Above: left, president's office; right, employees' cafeteria seats 500, has movie screen and amplifiers

Below: testing section of research laboratory. Here as in factory, rubber matting on floor reduces noise, vibration



## XPANDABLE PLANT

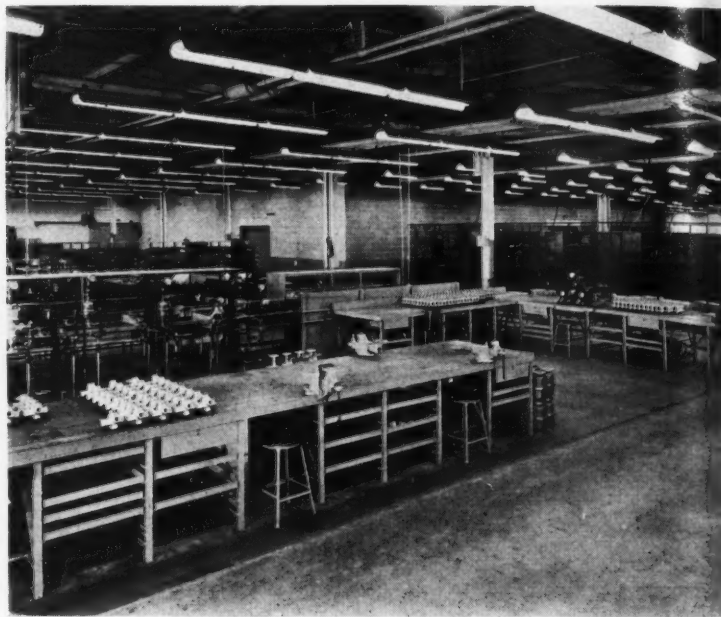
Welded steel construction resulted in a low steel weight per square foot of area, speeded up construction, and allowed wide, unobstructed bays. A well-insulated roof, elimination of skylights, and heat-resistant glass in all windows combined to permit reduction of the heating system by about 50 per cent. The factory section is heated with a hot water circulating system through unit

heaters and radiators under all windows. The office area is completely air conditioned.

Exterior walls are buff-colored brick with limestone trim and steel sash. Floors are asphalt tile in the office section, reinforced concrete treated with iron floor hardener in the factory area. Offices and cafeteria have acoustic ceilings. Lighting throughout is fluorescent.

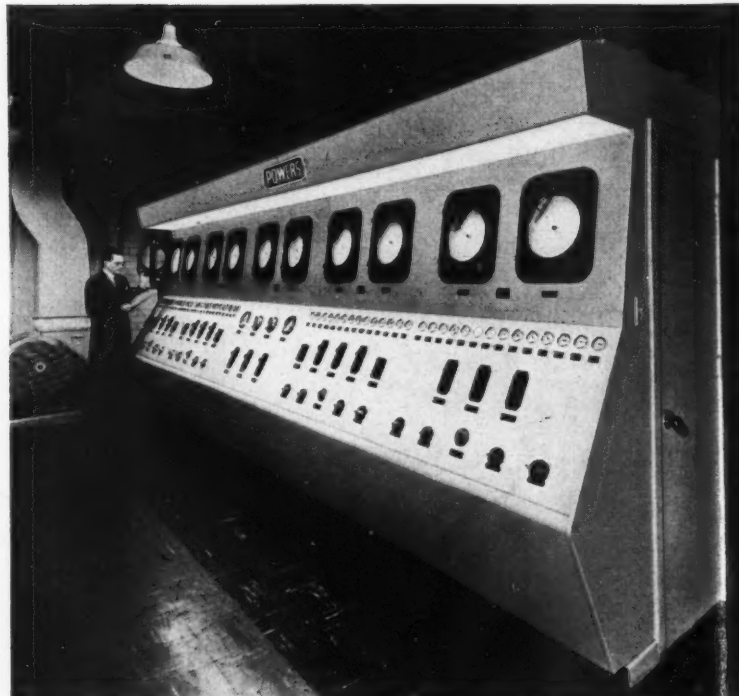
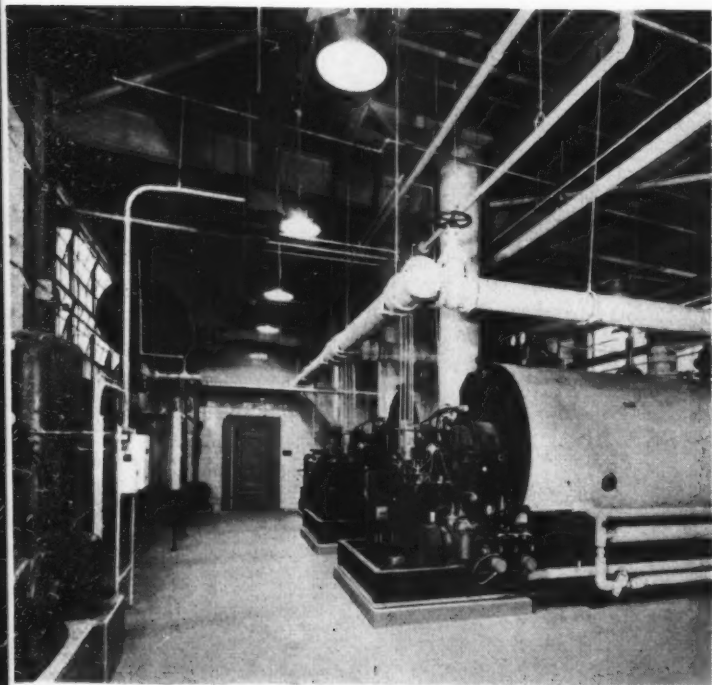


Chicago Architectural Photographing Company

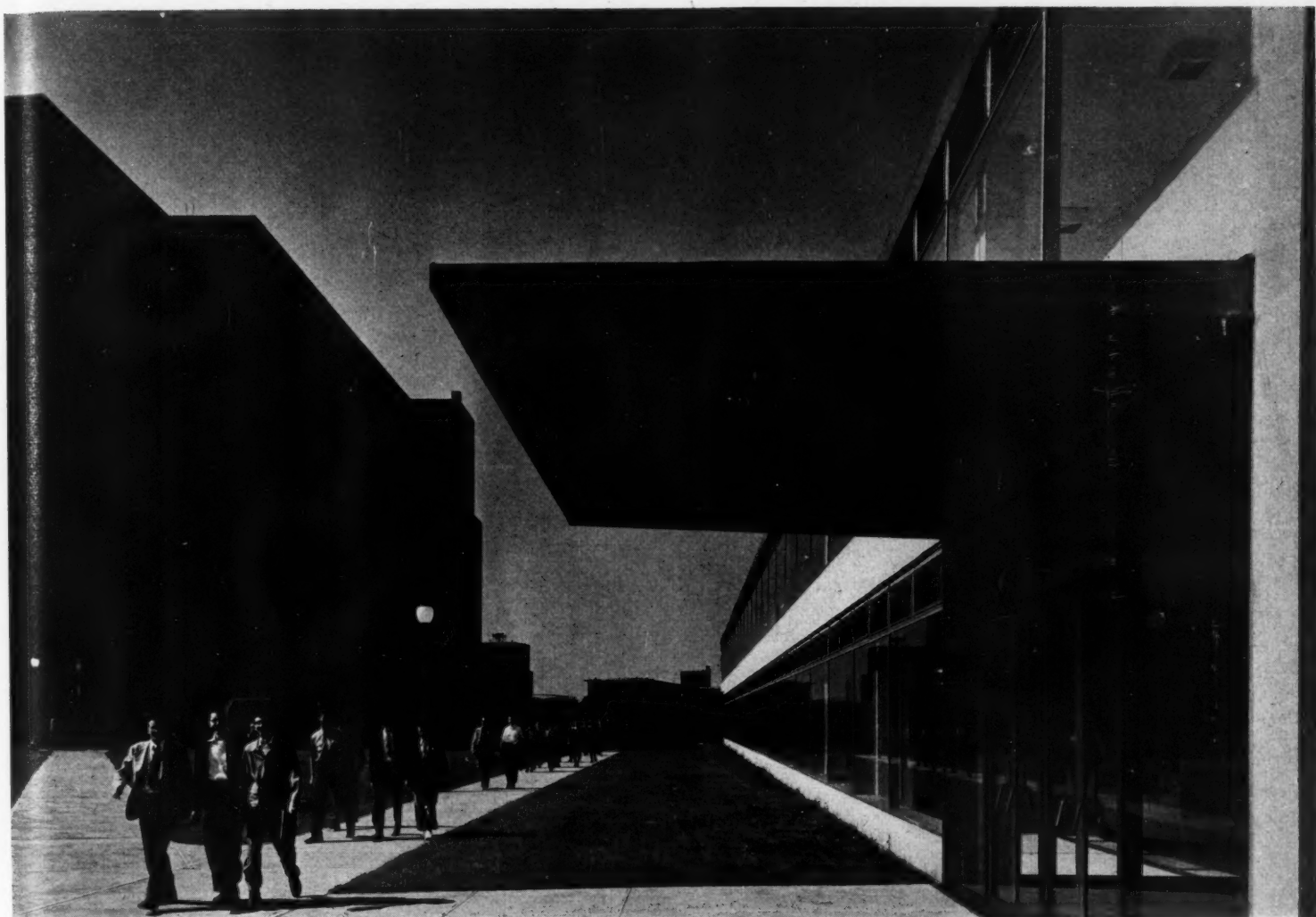


Center bays (above and above right) are used for storage, shipping and painting. Aisles are 10 ft wide to accommodate fork lift trucks. An electrified monorail hoist system delivers material from receiving dock to raw stock room. Entire building is sprinklered

Below, left: boiler room contains two oil fired boilers; underground tanks provide oil storage capacity for three coldest months. Below, right: control panel for heating and air conditioning. Walls are glazed tile, floors asphalt tile for easy maintenance







Torkel Korling

## MEDICAL CENTER FOR OHIO STATE

Ohio State Health Center, Columbus, Ohio

*Skidmore, Owings & Merrill, Architects*

### The Ohio State University

Dr. Howard L. Bevis,  
President  
Dr. Charles A. Doan,  
Dean of the College of Medicine  
Dr. Wendell D. Postle,  
Dean of the College of Dentistry

### Ohio State Department of Public Works

George B. Sowers,  
Director

### Ohio State Department of Health

Dr. John D. Porterfield,  
Director

### Ohio State Department of Public Welfare

Charles L. Sherwood,  
Director

### Skidmore, Owings & Merrill—Architects

N. A. Owings, Robert W. Cutler,  
Partners in charge

Edward A. Merrill,  
Project Manager

Andrew J. Brown,  
Structural Engineer

### Edward A. Salmon—Hospital Consultant

Samuel R. Lewis and Associates—  
Consulting Mechanical Engineers

Grove—Drake and Psaty—  
General Contractors



OHIO STATE HEALTH CENTER *Skidmore, Owings & Merrill*



Torkel Korling



NOW THAT IT IS LARGELY COMPLETED the Ohio State Health Center is fulfilling its early promise as both an advanced concept of state-wide medical care and study and a design project of imposing dimensions. Medical concept and planning were described in detail in *ARCHITECTURAL RECORD*, Nov. 1948; in brief the Health Center represents the centering of Ohio's health programs at the University, so that facilities for care, teaching and research can be adequate for all interests, without duplication of either facilities or talents in small units.

Architecturally the buildings express the power of such an alignment of science, scholarship and financial means. The huge slices of buildings, long and slick and businesslike, suggest competent care rather than cozy comforting of the patient. One need not merely guess that a sense of competence is reassuring to patients — when a group of patients were first moved from the older



Torkel Korling

buildings to the new University Hospital (the largest building, above) they scarcely rang their call bells all day. This is not to say that a hasty look at a facade was sufficient to produce such a reaction by patients; the claim here is just that the buildings express the competence. And, no doubt, by expressing it, add strength to it.

The buildings are placed generally east and west, so that most patient rooms get the southern exposure. A few rooms face the north, as there are some patients for whom sunshine is undesirable. Width of buildings is determined by optimum dimensions for a nursing wing. The windowless story in the main building, with exterior wall flush with outer edge of sunshades, represents a widening of the floor for operating departments.

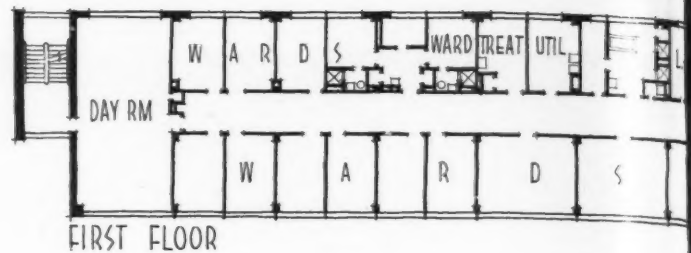
At the Health Center there has been some discussion of the amount of window glass on the southern exposure for patient rooms. It amounts merely to an academic



F. S. Lincoln

question about the merit of so much light for short-stay patients, especially in winter when sunlight enters the room, and when the views are a bit on the bleak side. In the summer, say the nurses, patients seem to be comforted by the views; it is suggested that this might be the reason for their not ringing the call bells, as previously mentioned.

Main building is a general hospital, nominally 600 beds, has fairly normal facilities for a large hospital, except that there is no outpatient department, this function remaining in the older building. Ground has been broken, however, for a fifth building in the group, to

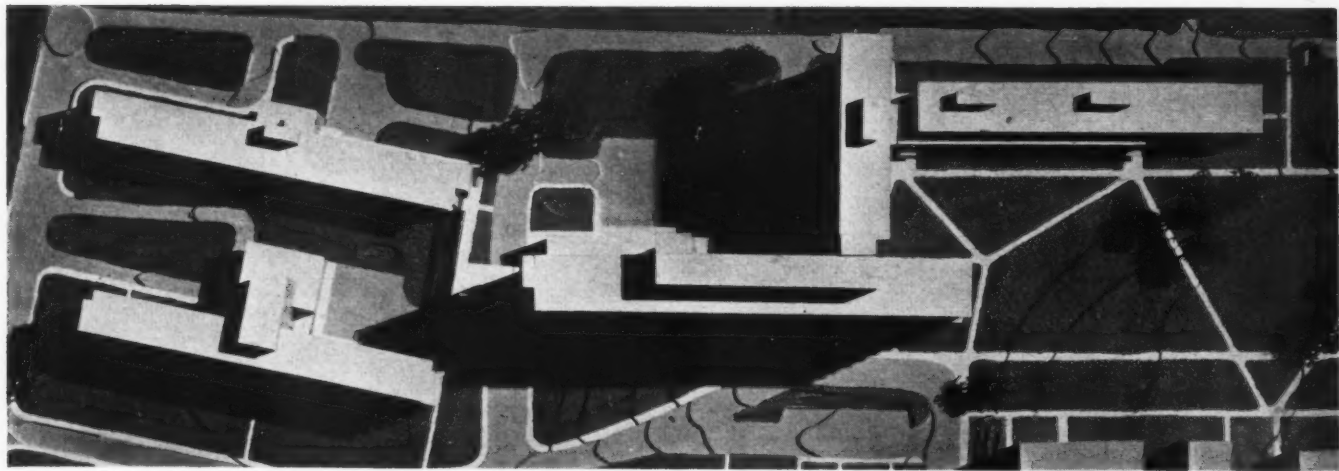


Receiving Hospital (mental patients) has two nursing units in a line. It has no need for extensive medical facilities; has only a small rear section for its treatment unit

Receiving Hospital ↓

University Clinic (under construction) ↓

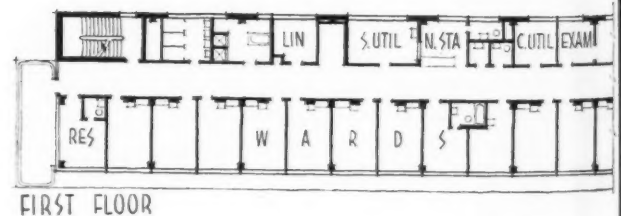
College of Dentistry ↓



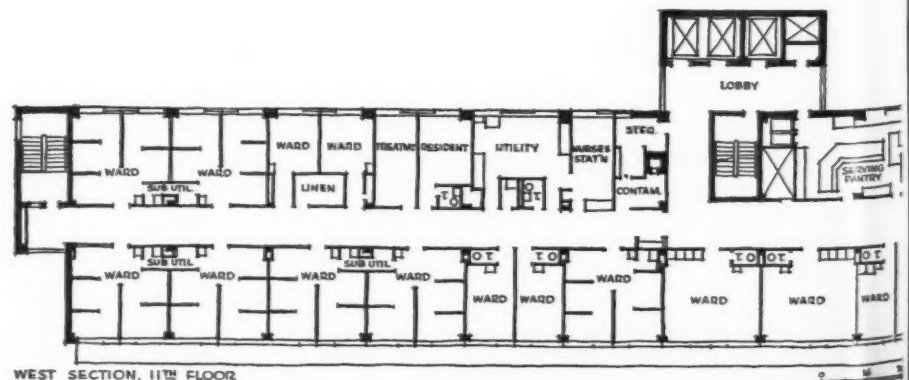
Tuberculosis Hospital ↑

University Hospital ↑

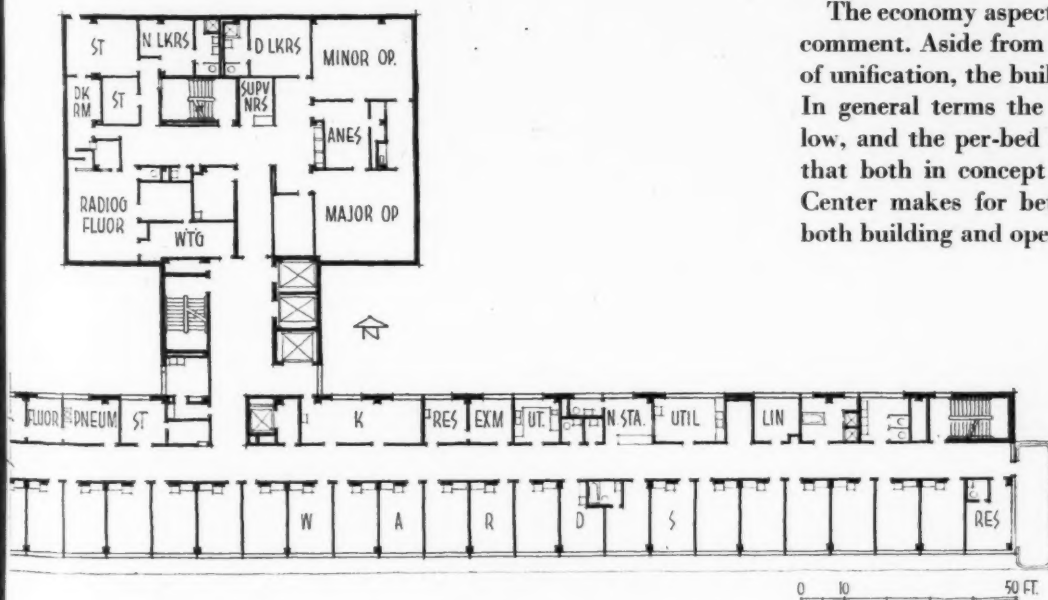
Tuberculosis Hospital also uses the long in-line scheme for nursing units, but has large rear extension for its laboratory and surgical facilities, as these procedures are largely special to a tuberculosis hospital



University Hospital (generall) keeps the long narrow form, with three nursing units in line. One floor, not shown, is widened to line of sun visors to provide room for surgical and maternity departments, without windows



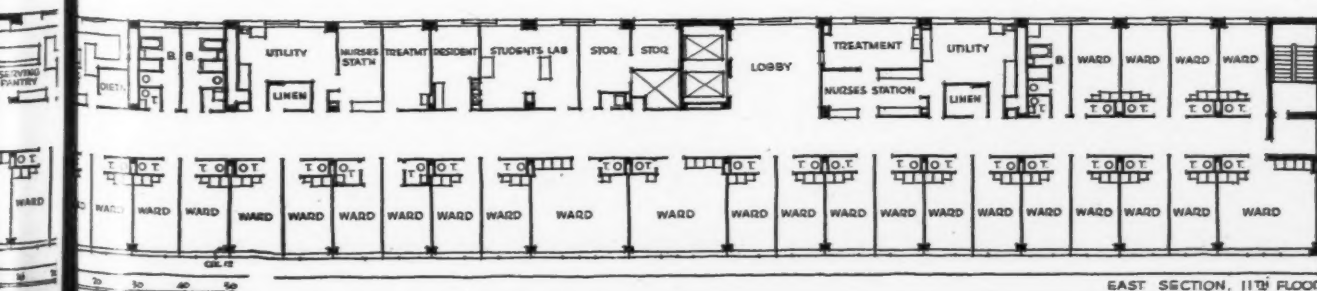




house outpatient department and research facilities. This will be a tie between the big hospital and the College of Dentistry Building. The main hospital is three nursing units long, which is to say that each nursing floor has three units of 30 beds each, arranged in a line, with three nursing stations.

Other buildings now complete are the College of Dentistry Building, the Tuberculosis Hospital and the Receiving Building, for mental patients. The latter two are under the State Department of Health, placed with the group for purposes already explained. The Receiving Building is especially well conceived in this respect; it is the intensive treatment unit for any newly committed mental patient in the state. He goes, not to some drab state institution with morbid associations, but merely to the Health Center at the University. The hope is that in a few months of intensive treatment he can be cured and discharged; if not, of course, he is transferred elsewhere for a more custodial care.

The economy aspect of the Health Center is worthy of comment. Aside from the basic economy of the concept of unification, the building scheme is generally efficient. In general terms the total building cubage per bed is low, and the per-bed cost economical, tending to show that both in concept and in planning the idea of the Center makes for better facilities and better care, in both building and operating expenditures.



OHIO STATE HEALTH CENTER *Skidmore, Owings & Merrill*



*University Hospital at left; College of Dentistry, right and above. A building connecting these two is now under construction*

Torkel Korling



General view

Tuberculosis





*General view of Tuberculosis Hospital*

*Tuberculosis Hospital at left; Receiving Hospital for mental patients in background*





**OHIO STATE HEALTH CENTER** *Skidmore, Owings & Merrill*



*Still unfurnished main lobby, University Hospital*

*Typical four-bed ward, University Hospital*

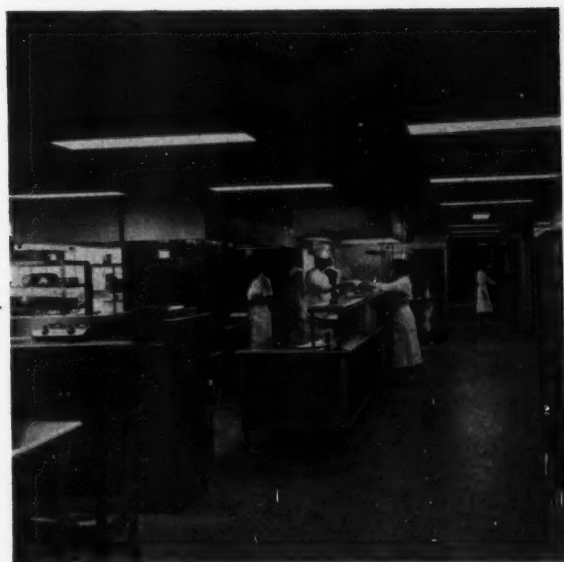




Reception room, Dental School



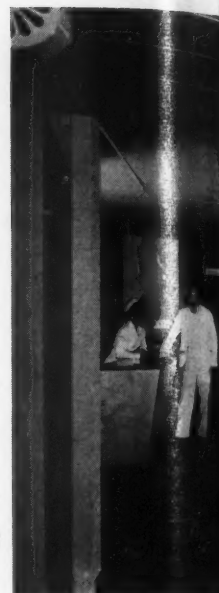
Admitting area, University Hospital



F. S. Lincoln



These remarkable photographs of a hospital in use show, in the strip at the right: recuperation room in maternity ward; nursery corridor; a delivery in progress. Below: dental clinic where students and faculty work together. Opposite page: a major operating room as it is actually used







F. S. Lincoln



# NAVAL AIR BASE IN NORTH AFRICA

*Mackenzie, Bogert and White, Architects and Engineers*

*James C. Mackenzie, Project Architect*

**A**RCHITECTS WORKING ON NAVY PROJECTS will find both considerable help awaiting them, in the form of schematics or definitives, and plenty of scope for normal design and planning techniques. In this case, a large naval air base in North Africa, the architects made use of definitive drawings for many types of buildings, drew their own plans for others. All of the basic schemes had to be modified both in construction and design for the semi-tropical climatic conditions and, of course, for the site plans developed. The site plan here, by the way, was not the least of the architects' assignment, and involved, besides normal planning problems, the integration of the new base with the original French constructions.

The architects made rather a point, with full blessings from the Navy, of giving attention to the architectural aspects of their work. The Navy is not known for throwing its money around for such nonsense as expensive monumentality, but within its budgets it considers appearance to be important.

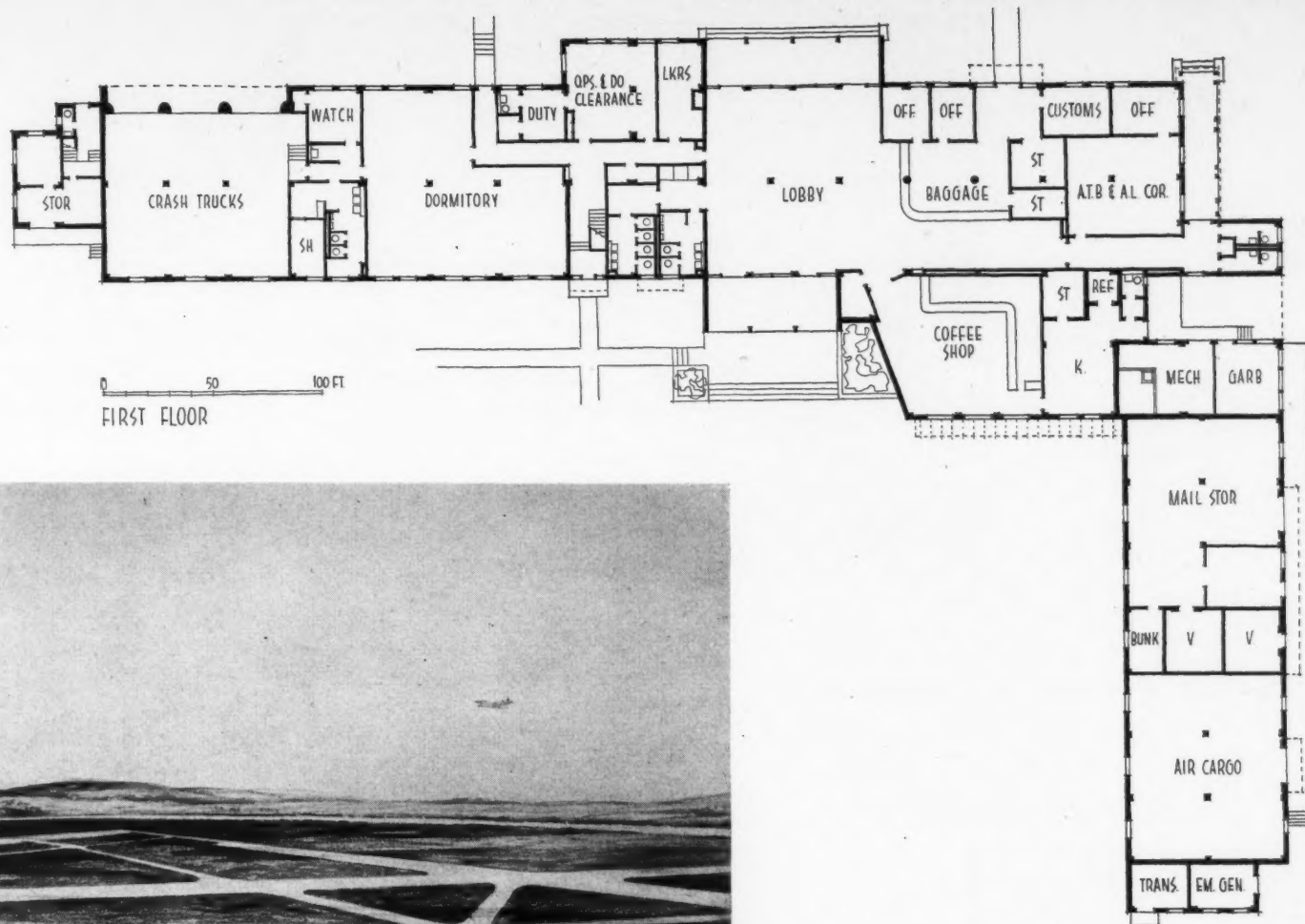
The site here provided both a flat stretch for runways and taxi strips, and higher ground for administrative buildings, barracks, mess facilities, housing, ships stores, and so on. Low lying hills in the surrounding terrain gave plenty of room for glide angles. And the North African absence of trees served notice that wood construction was not to be considered.

Local materials were concrete, tile, stucco and terrazzo, and they were used as far as possible. All buildings were designed with reinforced concrete frames with terra cotta back fill and with reinforced floor and roof slabs, stuccoed over on the exterior, a type of construction with which the local Arab labor was familiar.

Climatic conditions demanded a good deal of attention. The sun is quite hot for a large part of the year, but winter months see heavy rainfall. Also cool evening breezes from the sea are an important factor in orientation. In the public type of buildings concrete or bamboo sunshades protect windows with southern exposure. For residential buildings an outside roll-up, slat-type awning, much used locally, gives protection against either sun or rain. Gravity or mechanical vents were frequently used to keep interiors cool.

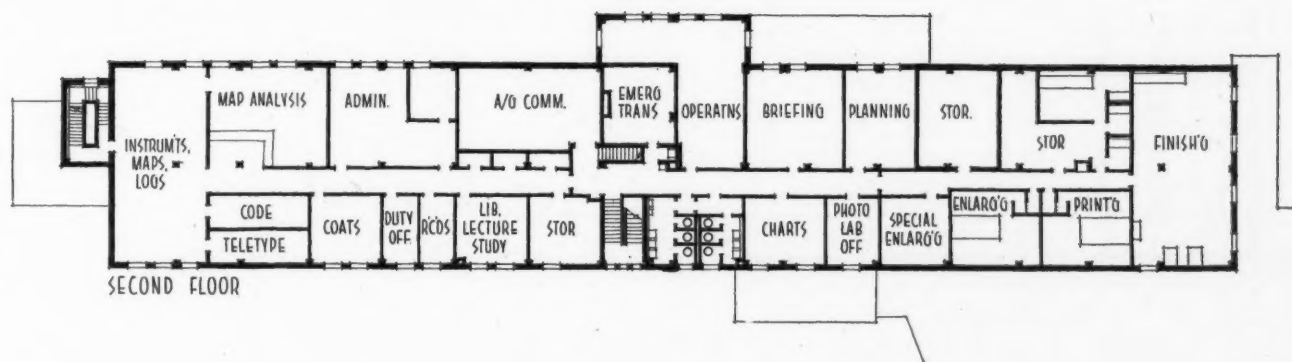
Esthetics were worked out in terms of mass and fenestration rather than in special materials or detailing. Color was used rather freely, both in colored stucco and in brush coated finishes, to relieve the monotony of a large group of similar buildings.



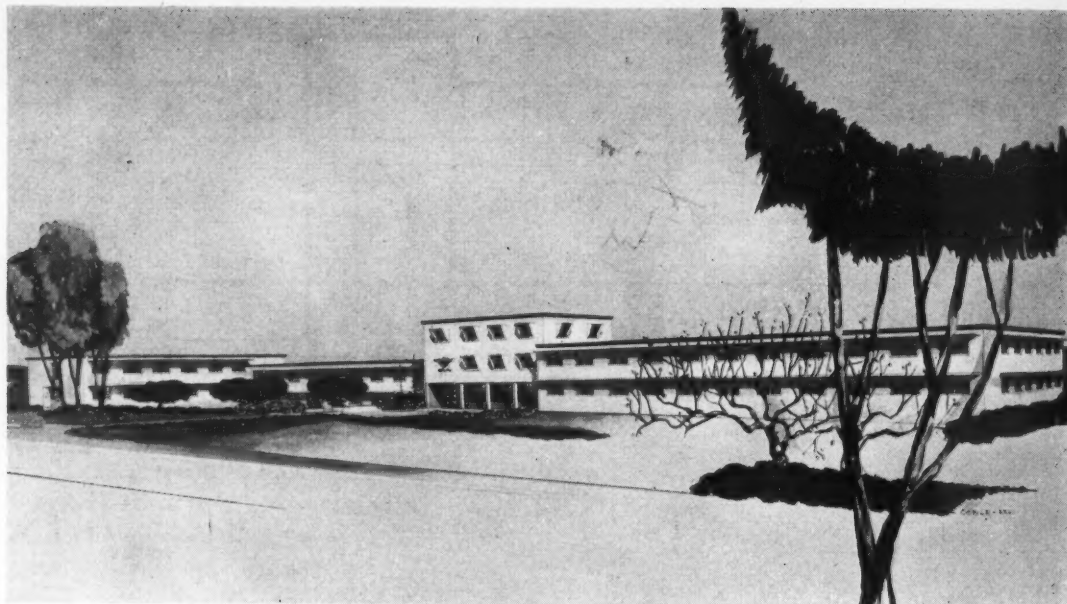


## OPERATIONS BUILDING

At a large air base, the Operations Building becomes an air terminal for a city which has no railroads. Here are mail and air cargo departments, customs office, and a varied array of facilities for personnel, including a dormitory for transients. Here the control tower overlooks both the old French airstrip and the new runway system. The building also houses meteorological facilities

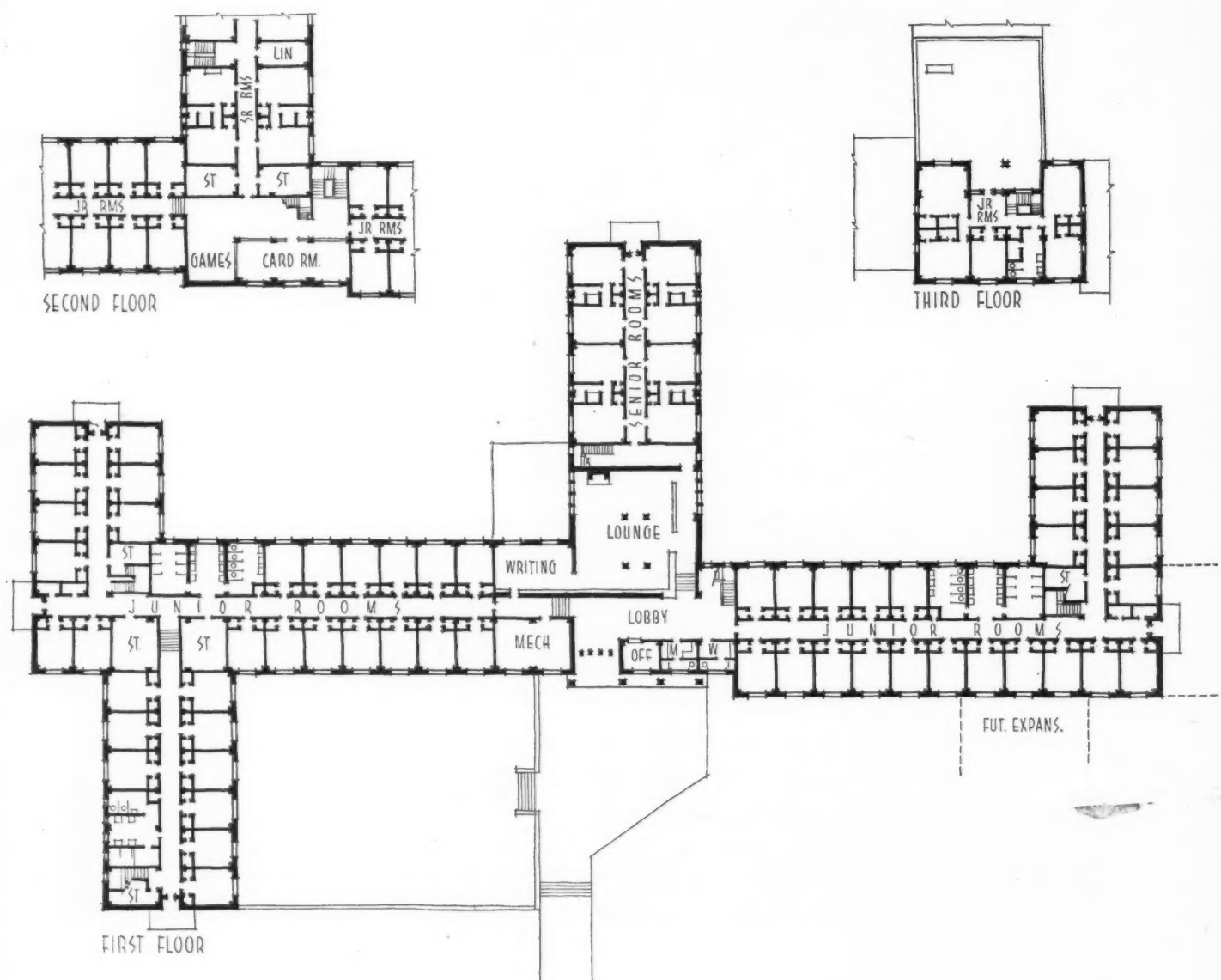


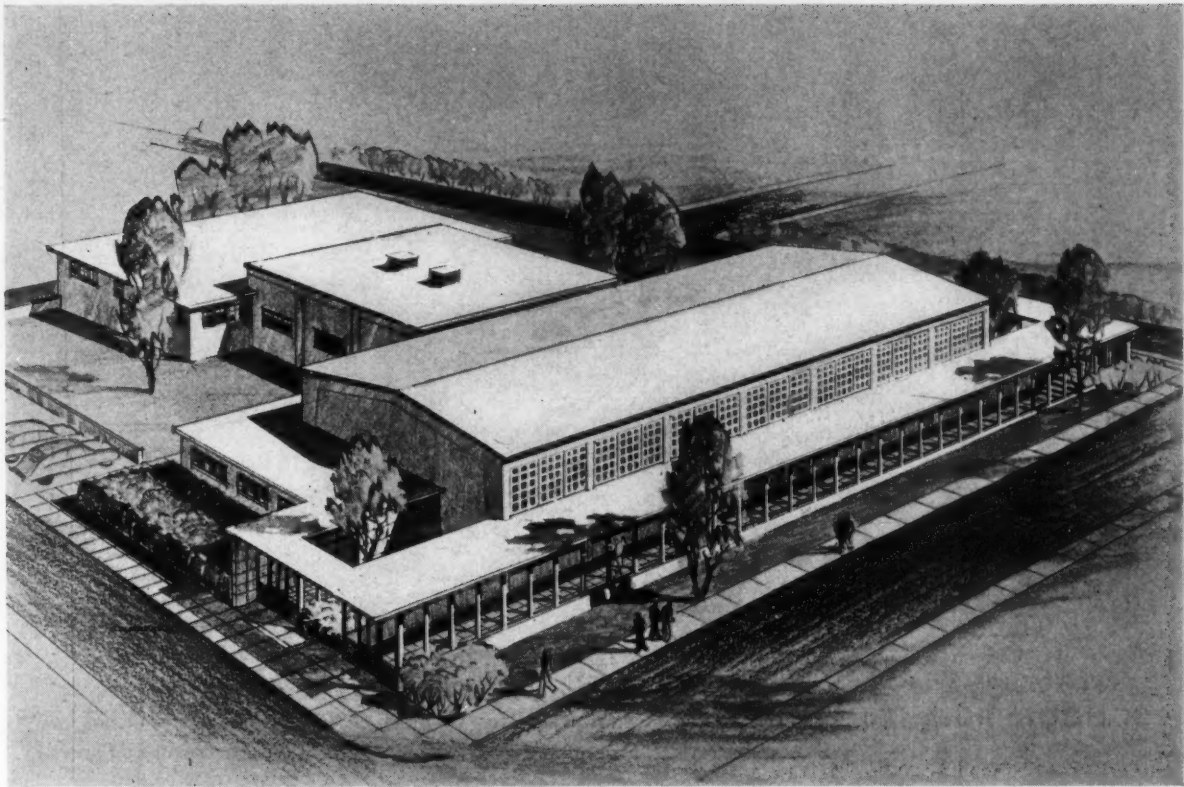




## BACHELOR OFFICERS' QUARTERS

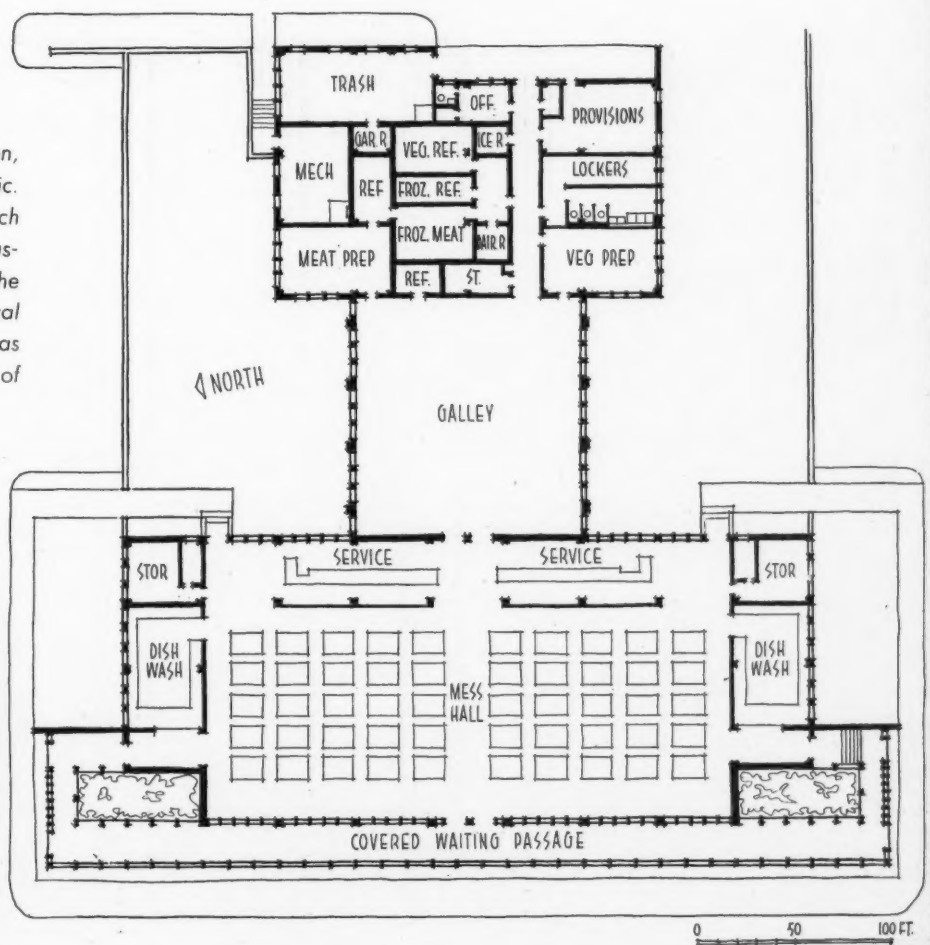
Being quite large, the B.O.Q. was given relief by off-setting wings slightly, adding a small third floor, and using natural grades for height variations. Concrete sunshades protect south windows, also add visual interest

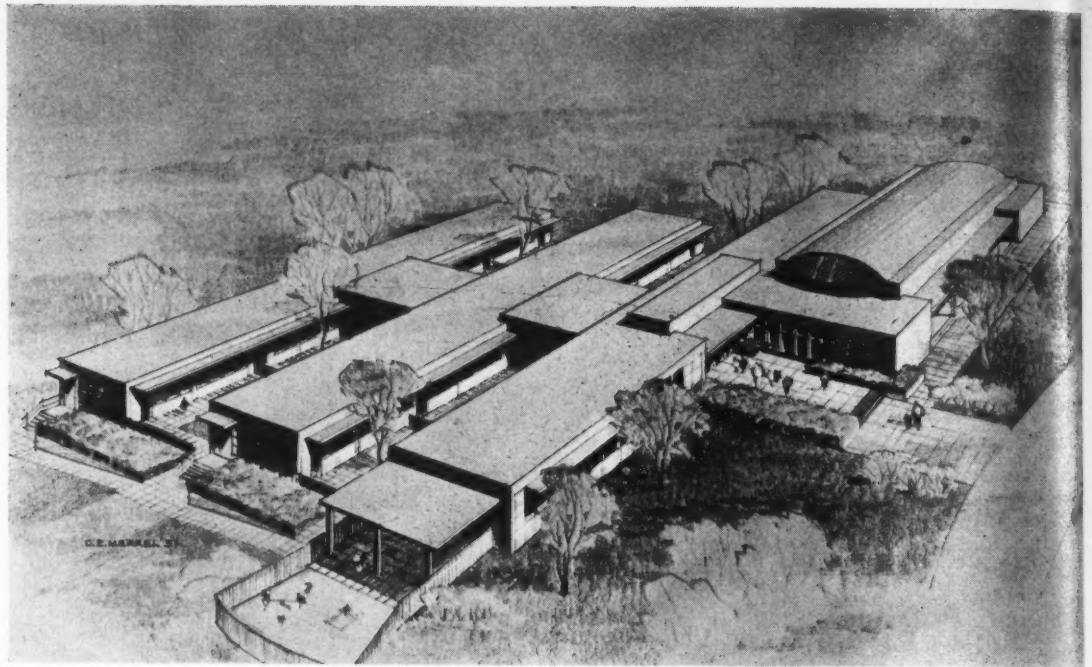




## ENLISTED MEN'S MESS HALL

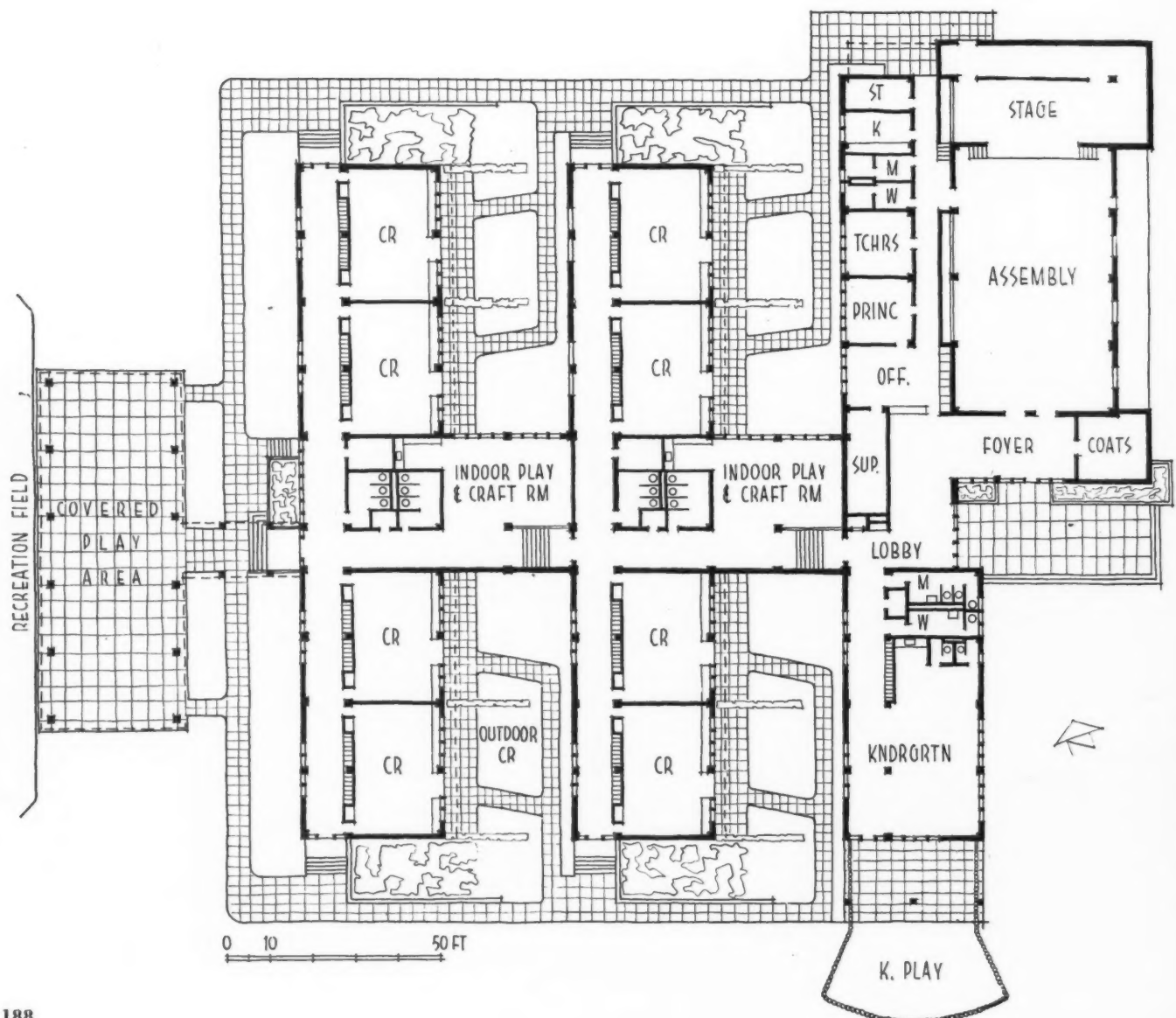
This mess hall, for 1,000 enlisted men, follows in general the navy schematic. An important addition is the long porch on the extreme side, to shelter the customary long queues of waiting men. The clerestory feature is a stock, local precast grille, protecting the glass as a sunshade, and adding a suggestion of local native architectural design.



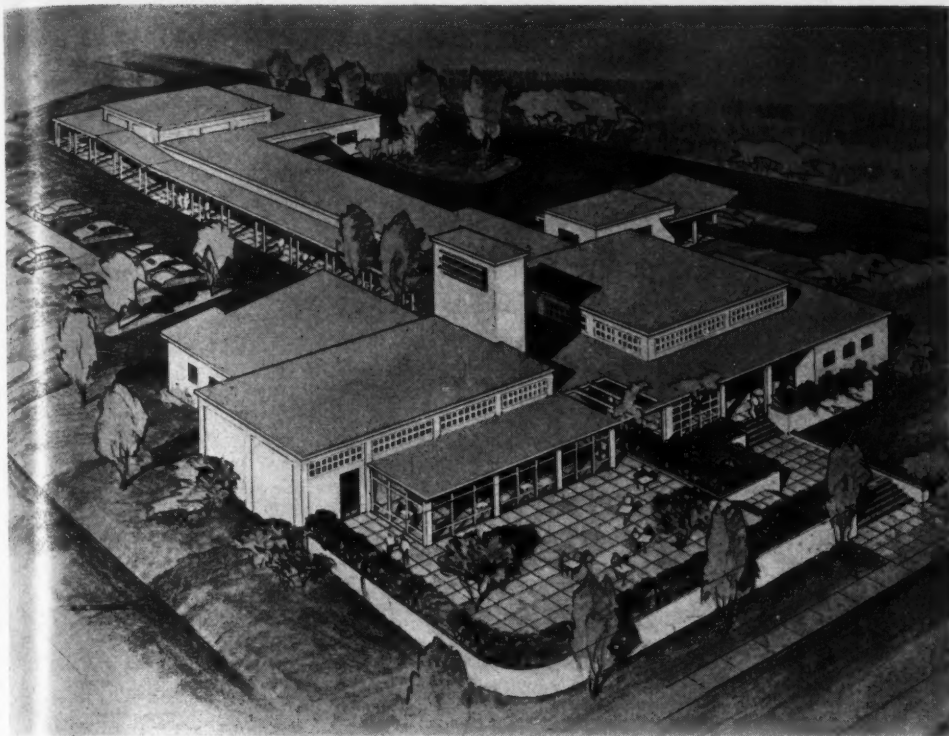


## SCHOOL FOR 150 PUPILS

*This looks like a modern elementary school, complete with finger plan and outdoor play area, and that's just what it is—for children of base personnel. It can be expanded in any direction, extending backbone or fingers*





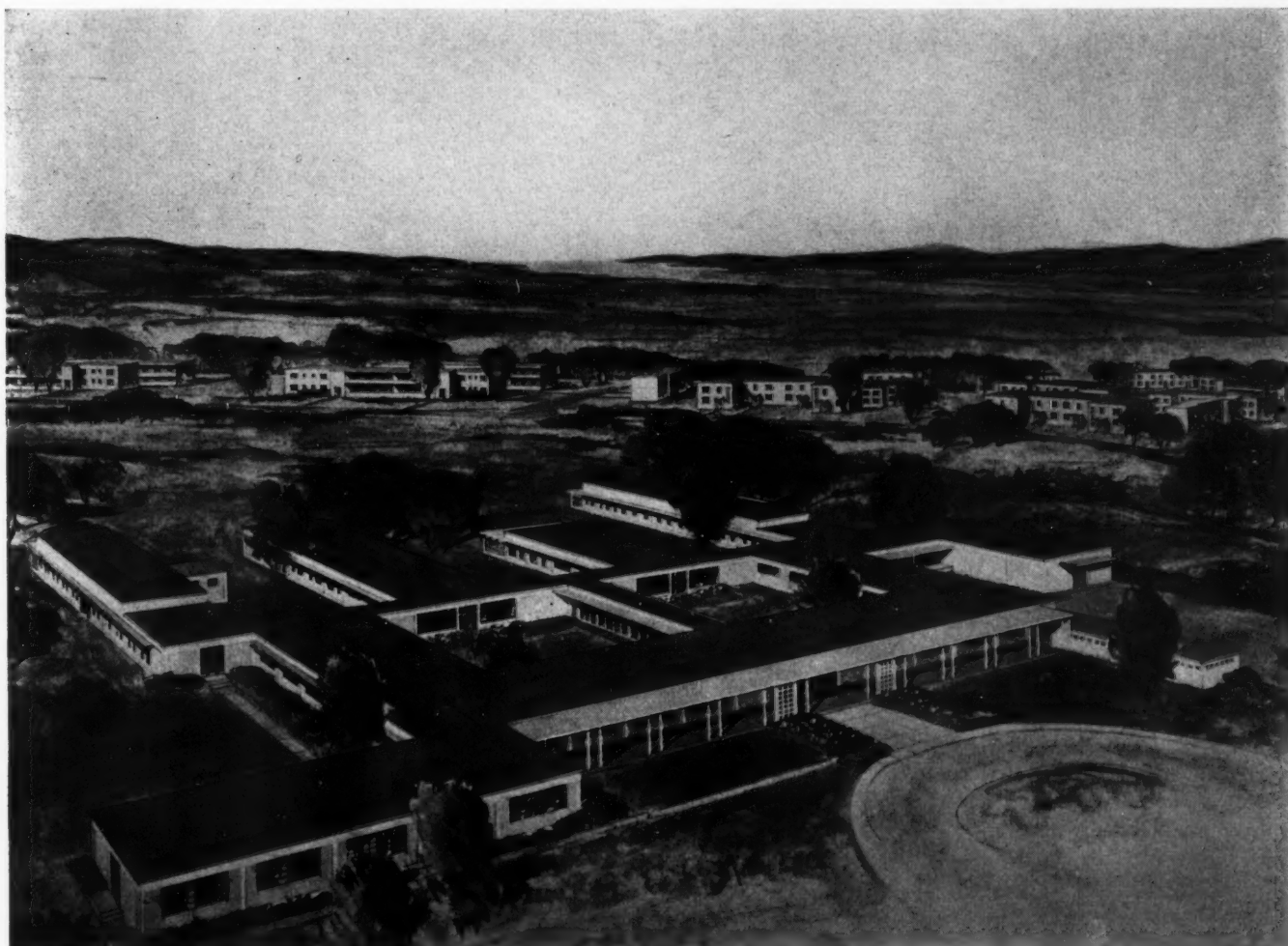


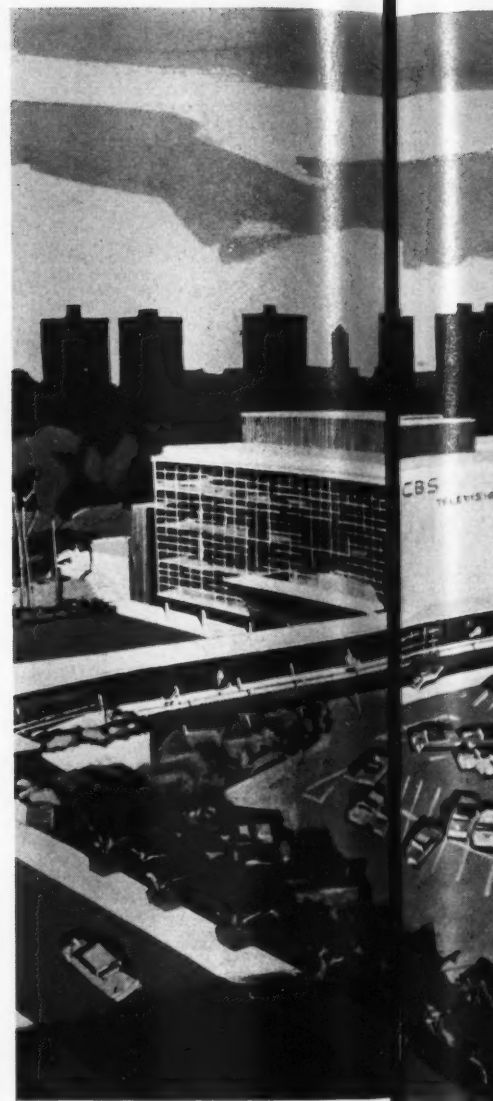
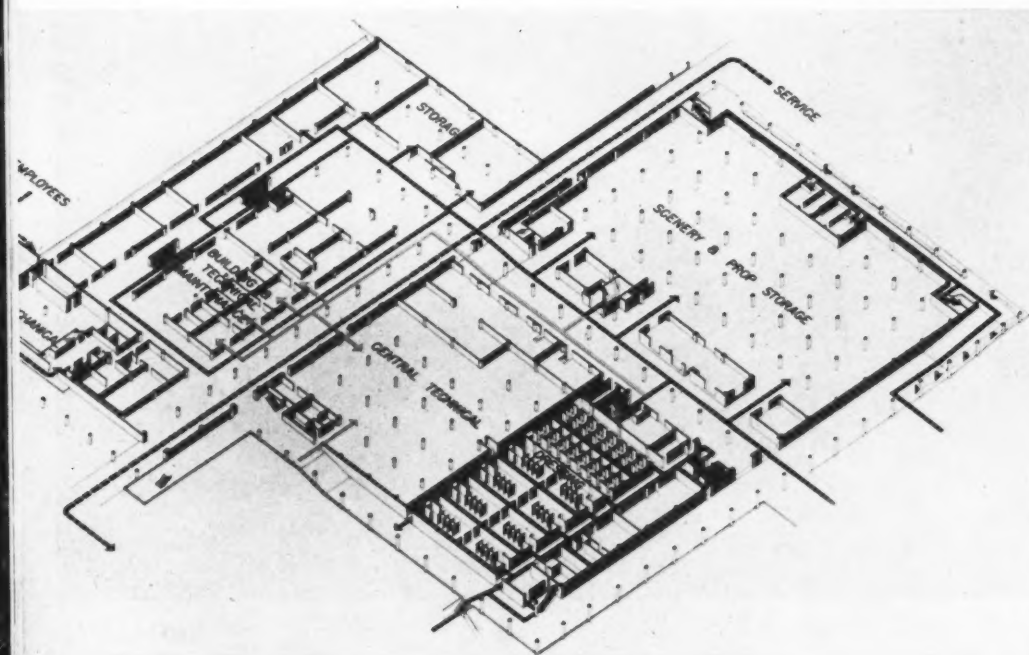
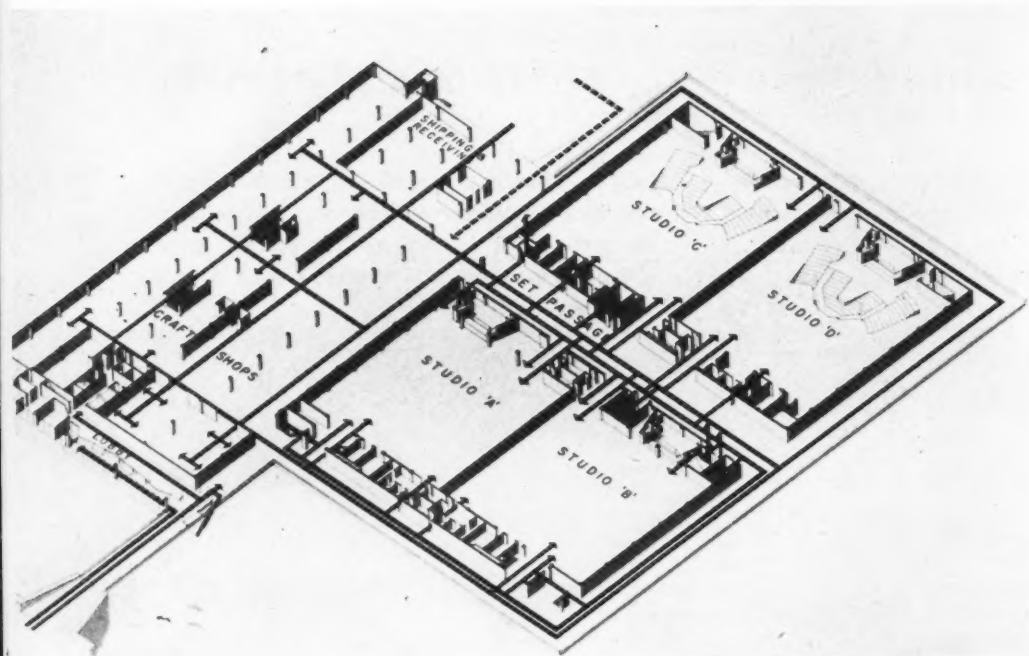
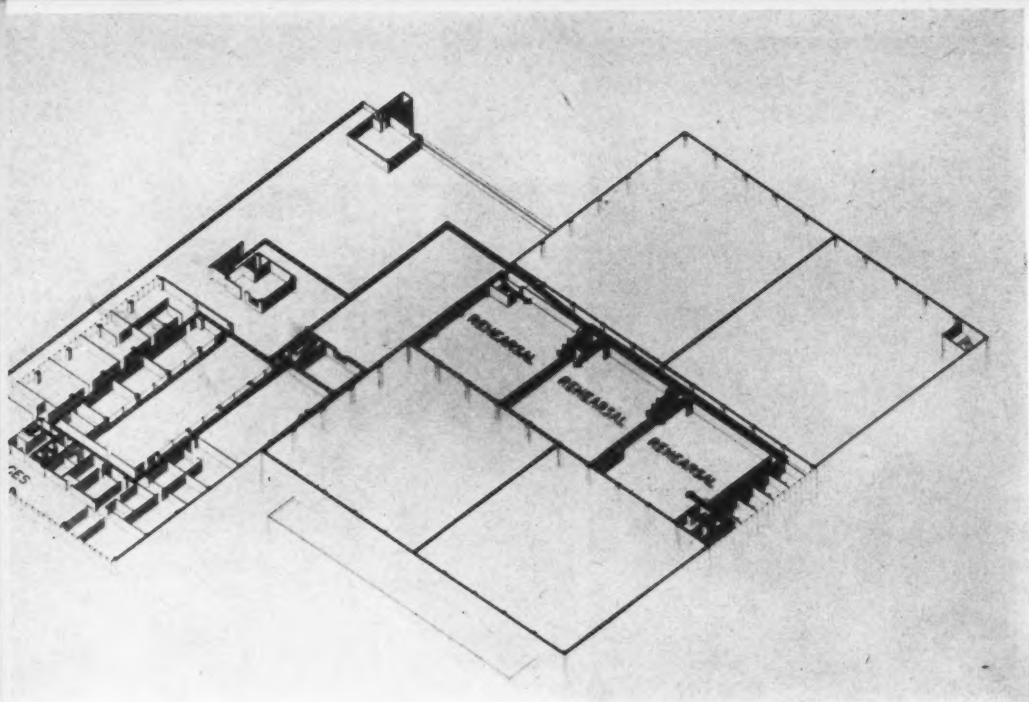
### SHIP'S STORES FACILITIES

*The Ship's Stores is the community shopping center for the base, for officers, men and housewives. Like other buildings it has the usual covered walks, there's hope some trees will grow for shade*

### 88-BED DISPENSARY

*Another important personnel facility is the dispensary, here located between barracks and housing. The grouping is interesting—four nursing wings in finger scheme, medical facilities around a court*





Plant is built around core of four studios on second floor, each containing 12,100 sq ft. Ramps and extra-size elevators facilitate flow of stage sets and materials from shops to studios and back to storage



# PREVIEW OF C.B.S. TELEVISION CITY

*Pereira and Luckman, Architects*



**A** FLEXIBLE, EXPANDABLE PLANT for TV production on a gigantic scale is the objective of the new C.B.S. Television City now rising on Gilmore Island, Los Angeles. The first unit is scheduled for completion in October, will house four huge studios, three rehearsal halls, carpenter shops and facilities for writers, directors, producers. Additional units, including a 13-story administration building, are to be added as TV expands. Exterior walls of a number of the first structures are built with hinged iron connections at supporting points, so they may be moved later. Walls separating many of the interior areas are movable so room sizes may be changed. Basic concept of the plan is a free flow of bulky sets and materials on a production-line basis. A grouping of long, relatively narrow buildings approximately 150 ft wide was selected, with a wide traffic platform encircling the studio area at second

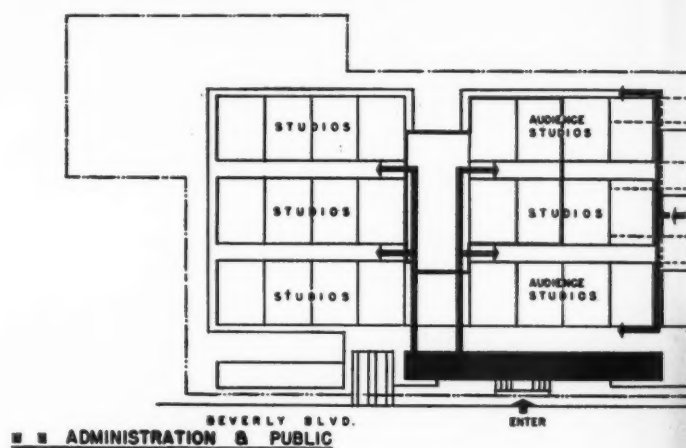
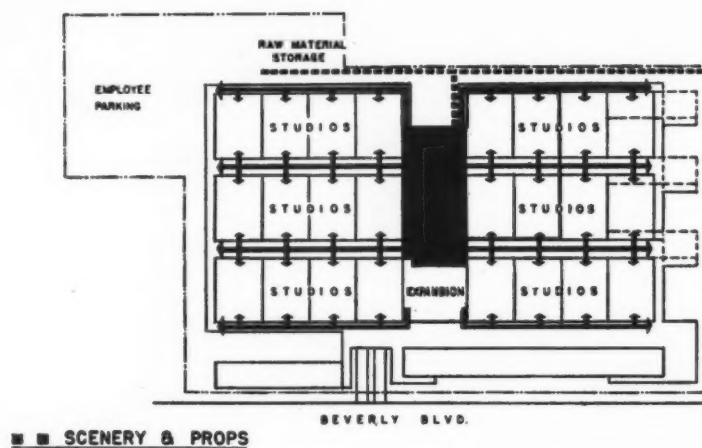
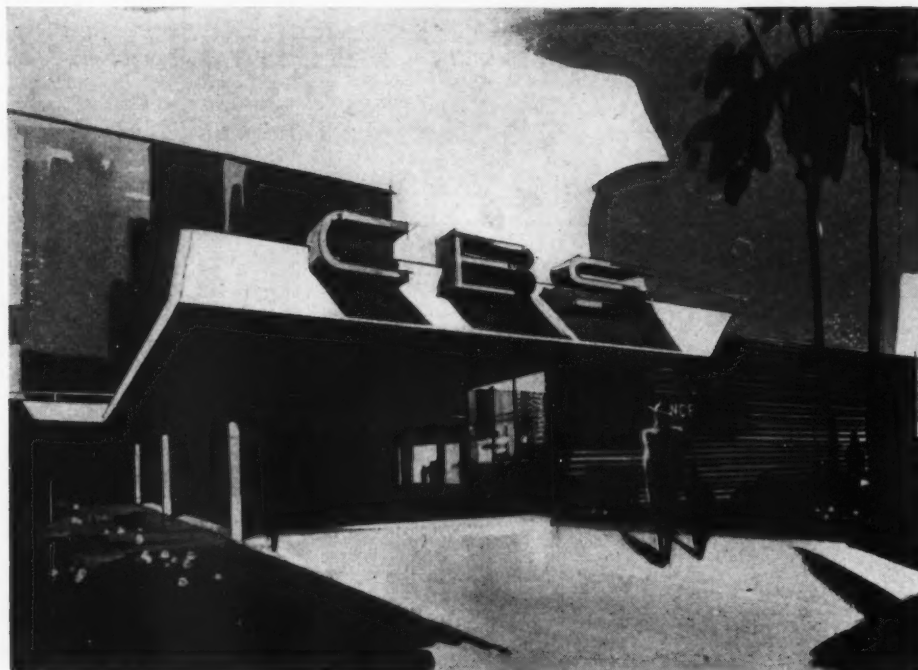
floor level. The first unit in Television City is described by William Pereira as "an experimental workshop," since many facilities will be relocated, changed or expanded as experience in this growing field dictates.

Concrete platform extends around second floor, handles heavy traffic flow to and from studios. Initial plant covers 15 acres, will later be expanded to cover 25

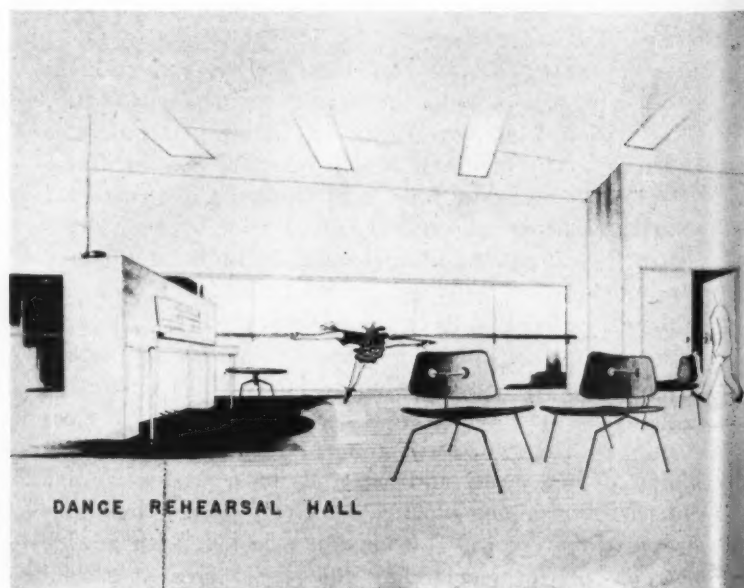
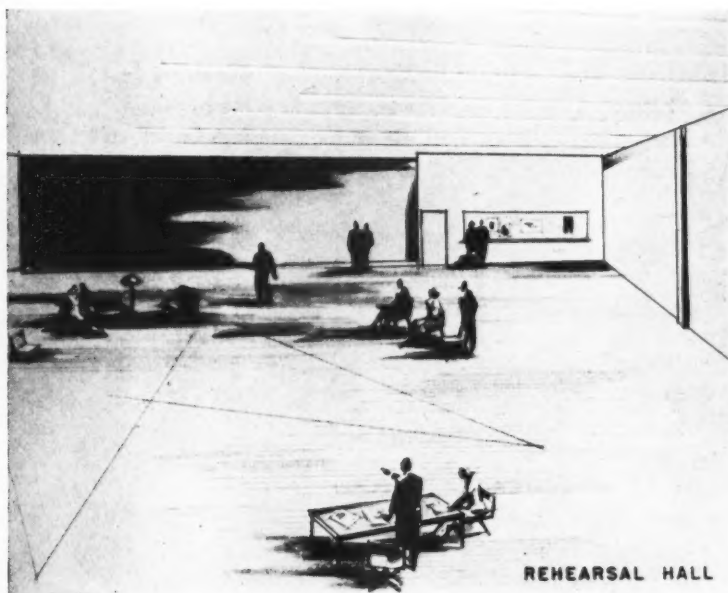


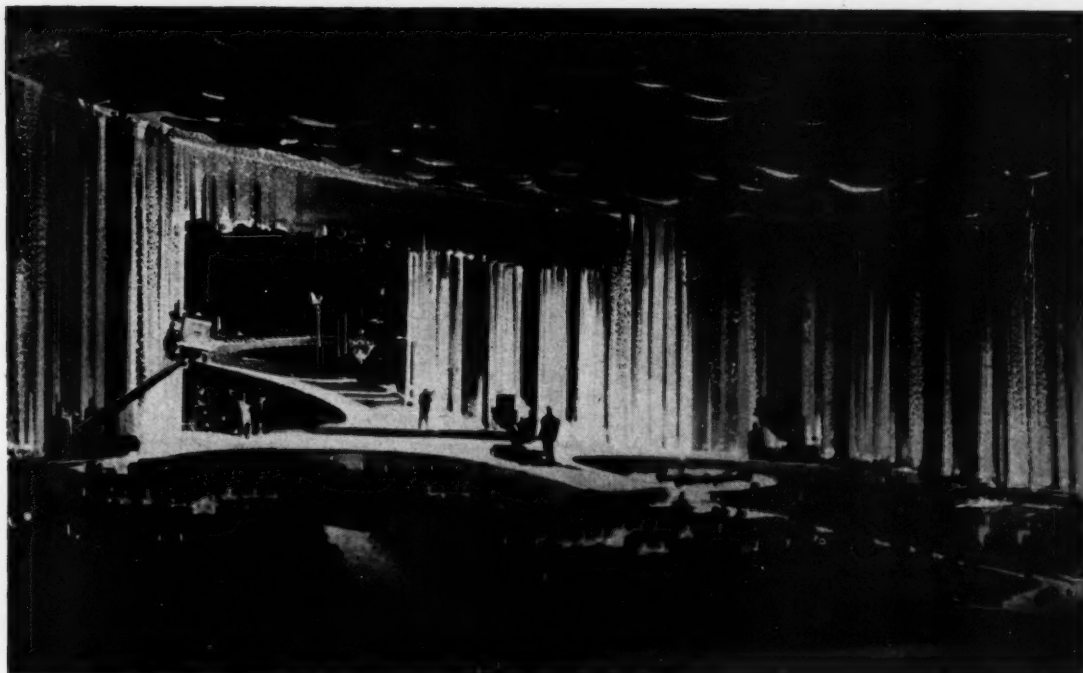
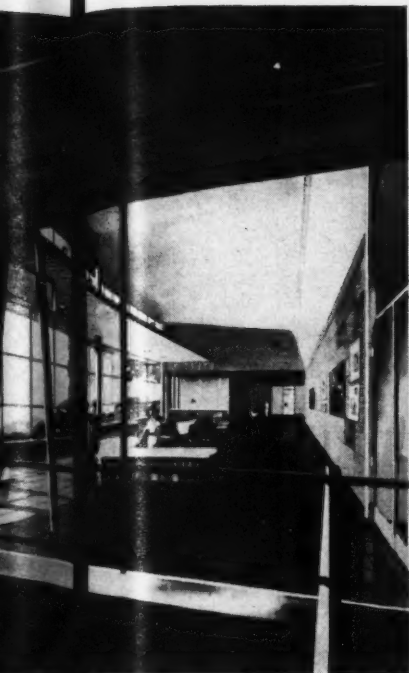
Ezra Stoller





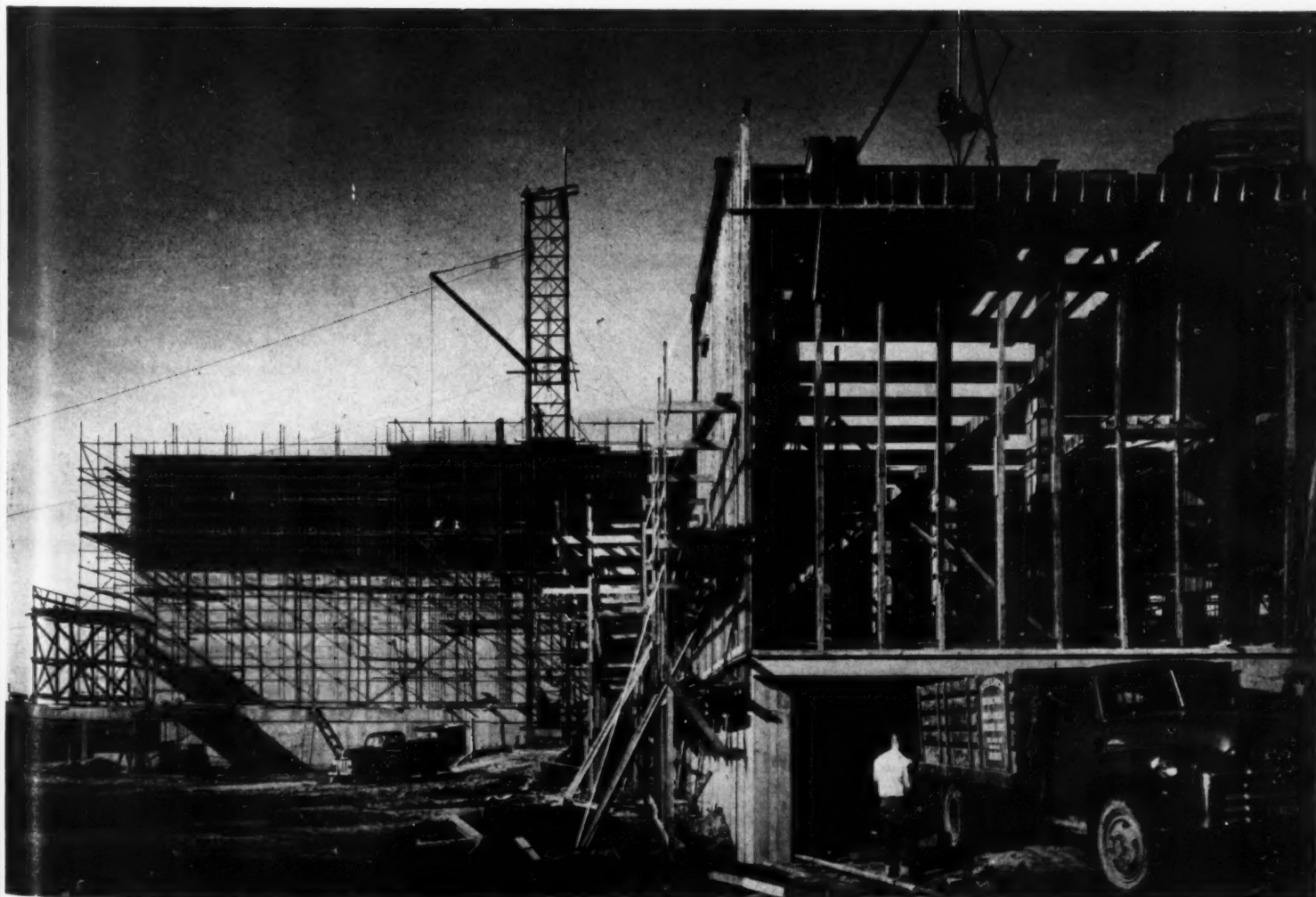
Flow diagrams were prepared to aid in charting TV production activities. Rehearsal hall (below) contains 4550 sq ft, has movable walls

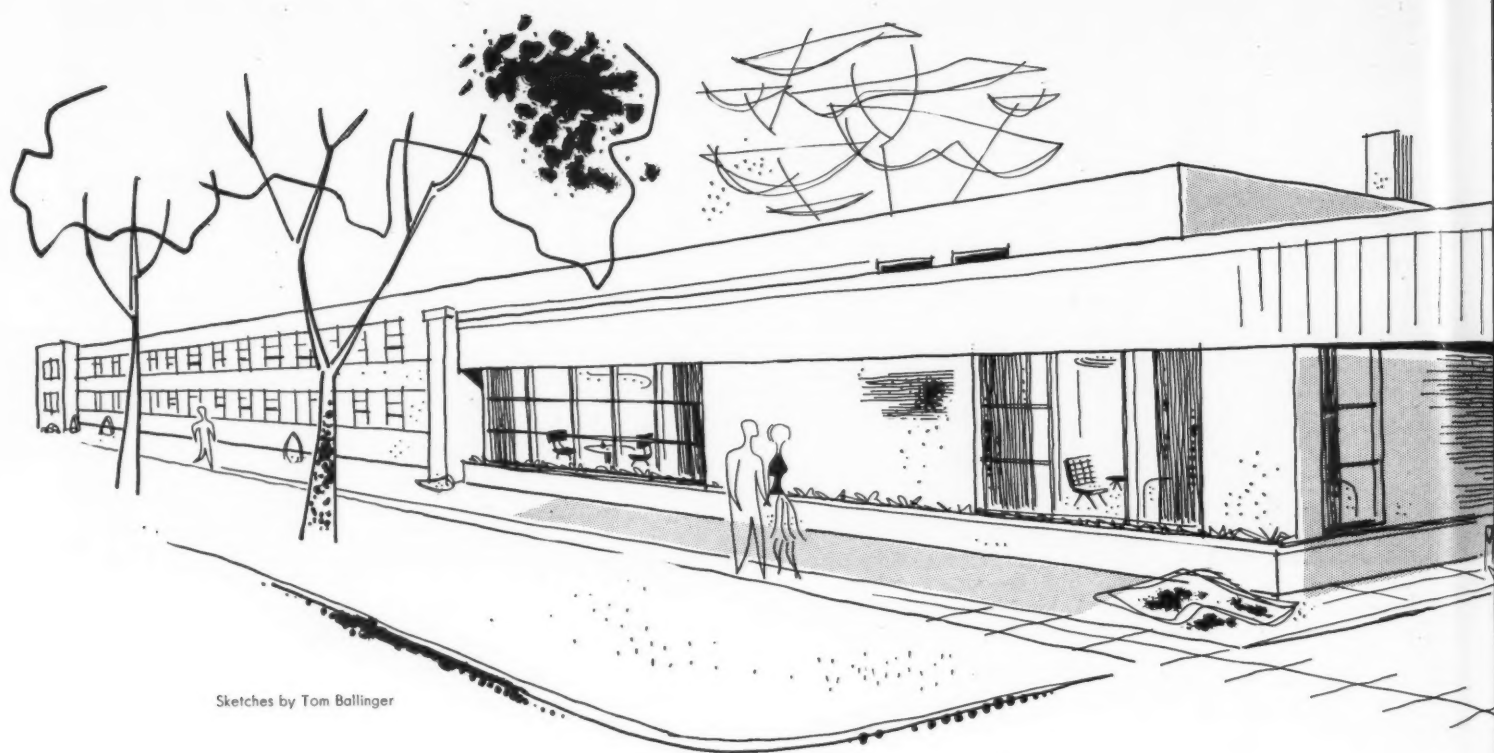




*Size, shape and number of stages in TV studios can be altered to meet changing requirements and audience seating can be varied, or removed entirely. Electronic system controls complex stage lighting installation. Construction of the \$35 million plant started in December 1950*

Photo by Ezra Stoller

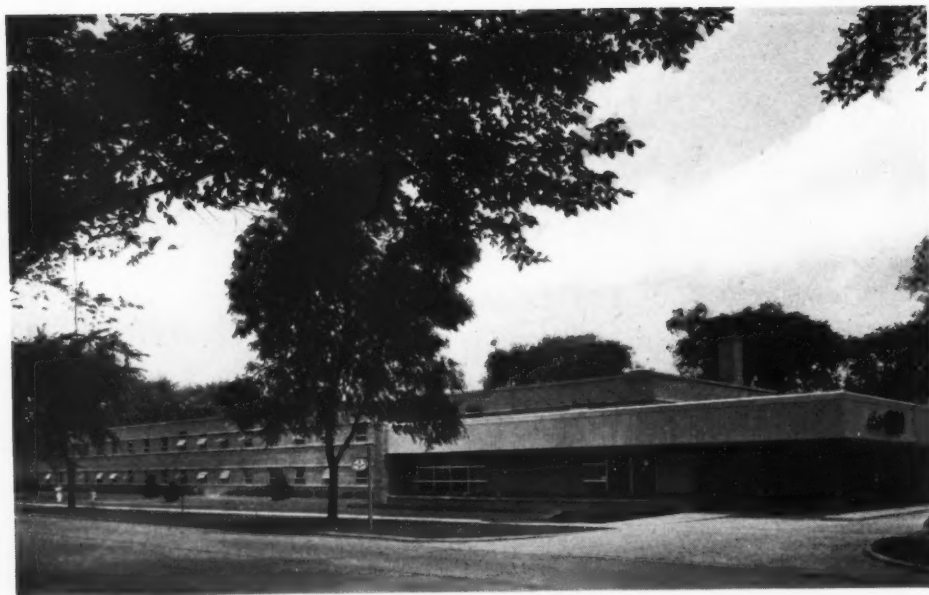




Sketches by Tom Ballinger

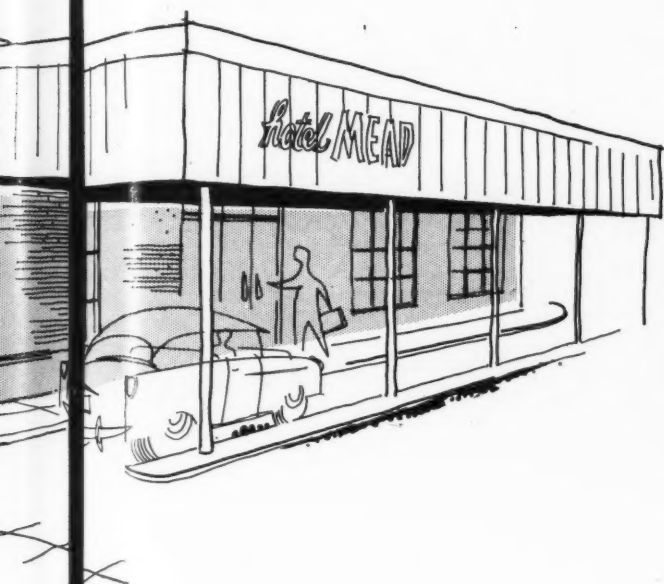
## WISCONSIN HOTEL

PR



*Neatly designed Hotel Mead is planned for convenience of motorists, is run similar to motel*





*Hotel Mead, Wisconsin Rapids, Wis.*

*Donn Hougen, Architect*

## PROVIDES MOTEL FACILITIES

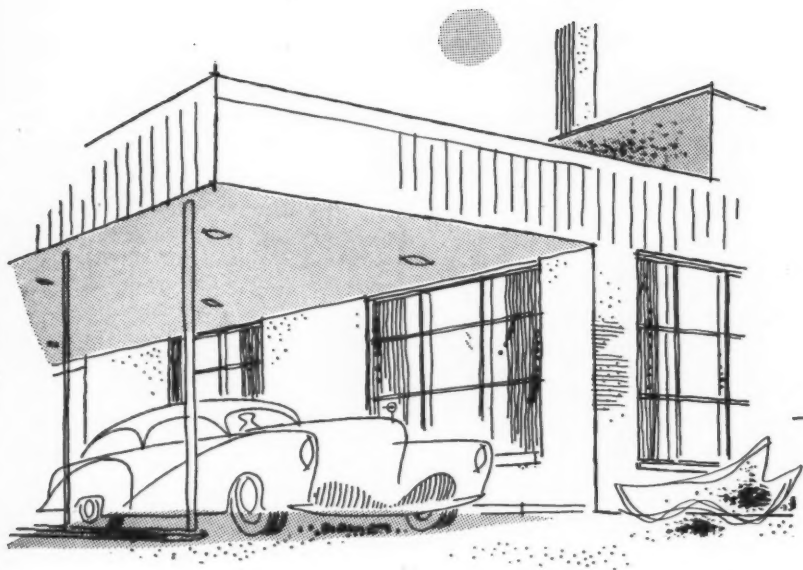
SINCE THE TOURIST COURT first made its appearance in outlying city areas, there has been a mounting concern among hotel planners and operators over the benefits that the courts, and the larger motels, offer automobile travelers: ample parking space, informality, no tipping. On the other hand, the downtown hotel still has certain advantages, especially for businessmen. The location is closer to business contacts, phone service is generally better, and meals and personal services are readily available if desired. Now we have a new concept, a "motelized hotel" which seeks to combine the features of both.

The new Mead Hotel was specifically designed to replace an older Wisconsin Rapids hotel, which is being torn down to make a place for a public park. Its "motelized" scheme was evolved after a survey of the area indicated that about 85 per cent of the hotel guests arrive by automobile. Throughout the project, the architect worked in close conjunction with the engineers and executives of the Consolidated Water Power and Paper Co., owners of the hotel.

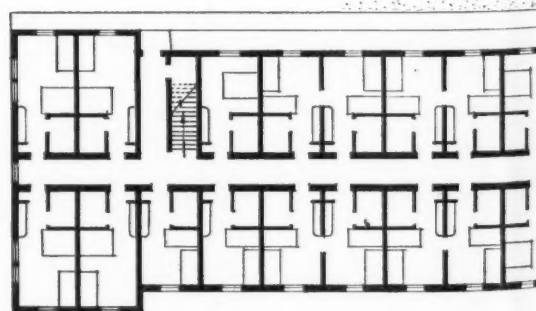
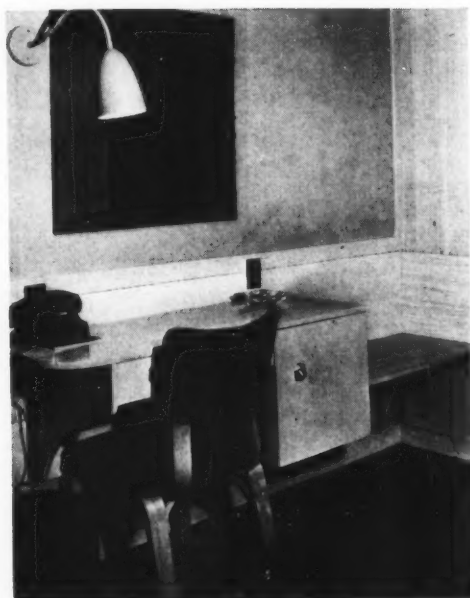
The site chosen for the building is on one of the main highways running through the community, and is located a short distance from the actual downtown business area. The plot layout provides access from the principal street through a covered drive flanking the lobby; the building entrance is set well back from the street to cut down traffic hazards. The parking lot is at the rear with exits on a minor street.

The building itself was planned with two floors of guest rooms flanking a central corridor. Three entrances from the parking lot minimize the distance from car to room. Public rooms — dining room, bar and lobby — are grouped by the front office. The building is constructed of steel, concrete and masonry, and is radiant-heated by wrought iron coils in the first floor slab, copper coils in the second floor ceiling. All public areas are air conditioned, and corridors are pressurized by air conditioned units to provide a supply of filtered air to guest rooms. Acoustical plaster, carpeting, and painted cinder block corridor walls are used to cut down noise throughout the building.

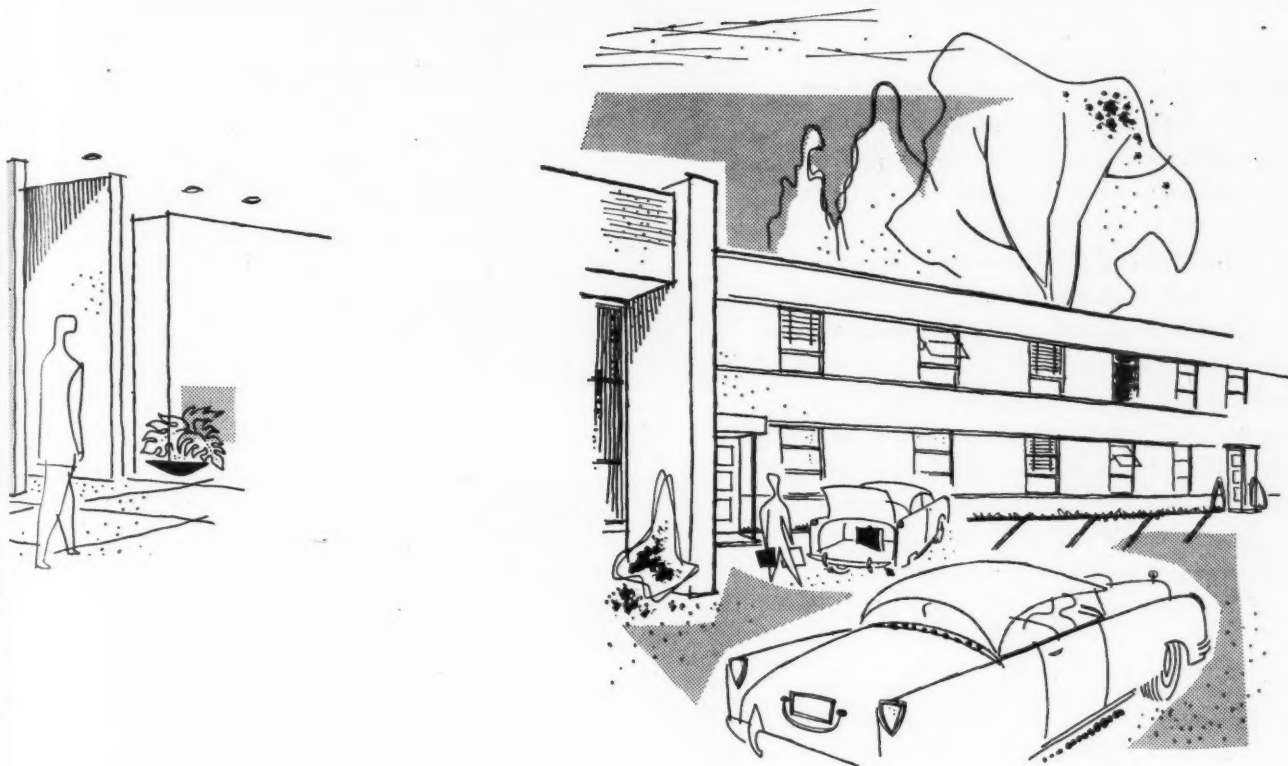
# HOTEL-MOTEL



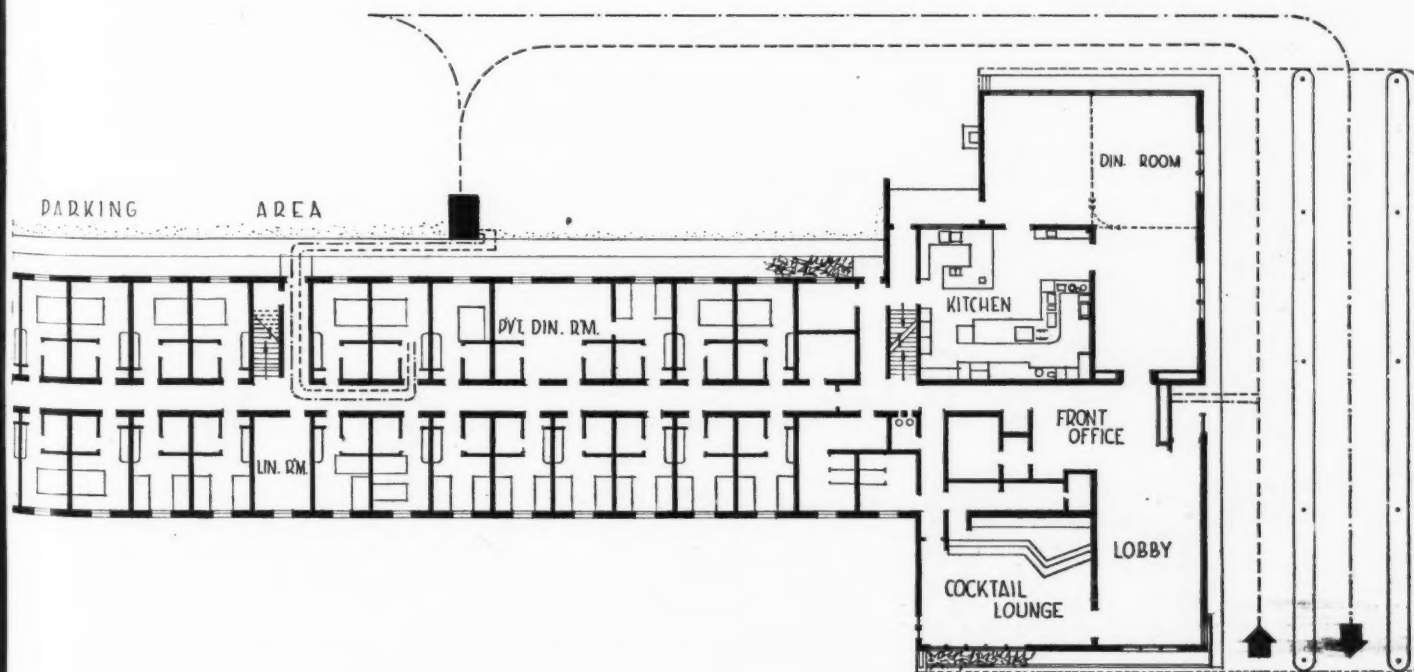
Circulation for hotel guests is carefully worked out. From main highway, guest drives under canopy to front entrance. Long drive is heated, shelters several cars. At front office, guest is assigned key, parking place by rear entrance nearest his room. Desk has 24 hour service. After parking, the guest carries own luggage to first or second floor room. Same key unlocks outside door and room. All 84 rooms have baths, outside exposure; interiors are simple, comfortable, have multi-purpose desk-dressers. Parking area exits on secondary street to rear; guest needn't return to lobby until he checks out



5 0 5 10 15 20 25 30 FT.



Second floor guestroom plan is identical to first (below), with manager's apartment at right. A basement is under lobby, dining and kitchen area, and houses heating system, food preparation and storage rooms, employees' lockers





## HOTEL-MOTEL

All public and service rooms are grouped at the entrance end of the building for easy supervision, and for convenient access by both hotel guests and community residents. Lobby, dining room and bar are all designed with numerous windows overlooking the quiet residential neighborhood. As in the guest rooms, interiors are kept simple, unobtrusive, comfortable. The dining room has an L-shaped plan and folding partitions, so that it can be divided in several ways to accommodate club and community groups as well as hotel guests. A small private dining room down the hall from the kitchen is planned for conversion into two extra guest rooms when needed. Plastic laminates are used extensively throughout the building to simplify upkeep. Such surfaces include counter, desk and table tops, bathroom walls, door surfaces, bed headboards and upholstery.



Sketches by Tom Ballinger

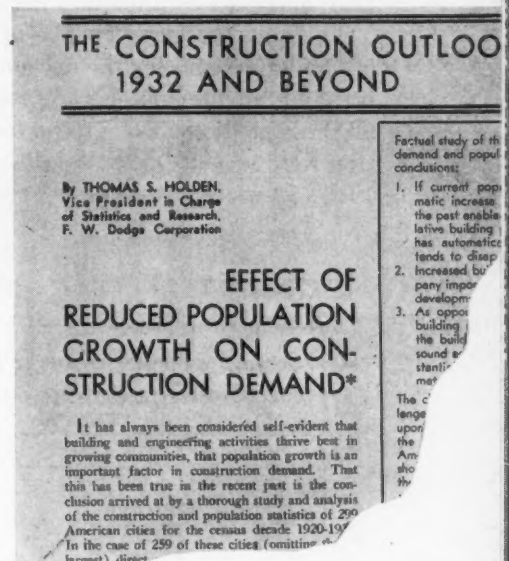


# THE BIG NEWS IS THE BIRTH RATE

By Thomas S. Holden, President  
F. W. Dodge Corporation

Twenty-one million new Americans will strain the nation's productive capacity and shelter facilities; will require factories, power developments, water supply, highways, houses, schools, churches, hospitals, shopping centers, parks, playgrounds. No visible let-up in construction demand in prospect.

1932 article laid basis for  
continuing population studies



**P**OSTWAR BABIES are making their weight count in the American economy. Fastest moving item in Sears-Roebuck's sales last year was diapers. I am sure that statistics on sales of cowboy suits to five-year olds, if available, would make interesting reading. In the week of March 10, 1952, New York's biggest toy fair attracted ten thousand buyers come to place orders for Christmas trade. Readers of ARCHITECTURAL RECORD are thoroughly familiar with the primary and secondary school building boom that is going on all over the nation.

The United States baby crop broke all records in 1951. There were 3,900,000 new arrivals on the scene. That meant 75,000 new consumers every single week; or, if you prefer, 10,700 every day, 445 every hour, or 7.4 every minute. On arrival all were new prospects for everything the American economy has to offer.

Last year's baby total seems to be symptomatic of a trend, as is indicated in Chart I. A record number of marriages in 1946 (2,291,000) was followed by a record baby crop in 1947, almost as high as last year's figure.

In 1947, for the first time since 1915, the nation's birth rate was over 25 per thousand of population. There had been a marked downtrend in the birth rate from 1915 through 1933, then a moderate increase leading to the spectacular jump in 1947. Since 1947 the rate dropped off a little, but was again over 25 per thousand in 1951.

A striking fact concerning the 1951 baby total is that this all-time record number of births, which actually exceeded the 1947 total, followed a year (1950) in which total marriages were 27 per cent fewer than in the record marriage year 1946. It looks as if postwar parents are going in for larger families.

As might be expected, last year also broke all previous records for net population gain. Estimated net increase

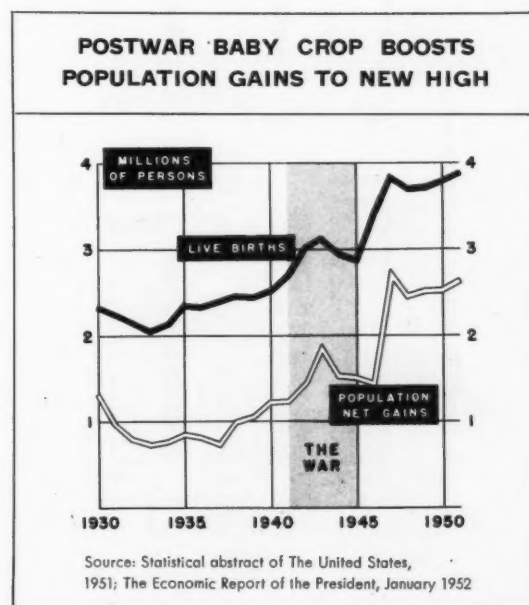
was 2,650,000 persons: 3,900,000 babies plus 200,000 immigrants (of all ages) minus 1,450,000 persons of all ages who died in 1951. This net gain was rather more than the present total population of metropolitan Los Angeles. During each of the past five years the net gain in population has been more than 2½ millions.

## POPULATION TRENDS

A quick review of census figures reveals striking stories of what has happened and what is happening with respect to U. S. population.

The 1920-1930 census decade showed a net gain of 17,611,000 persons, the largest increase recorded for

CHART I

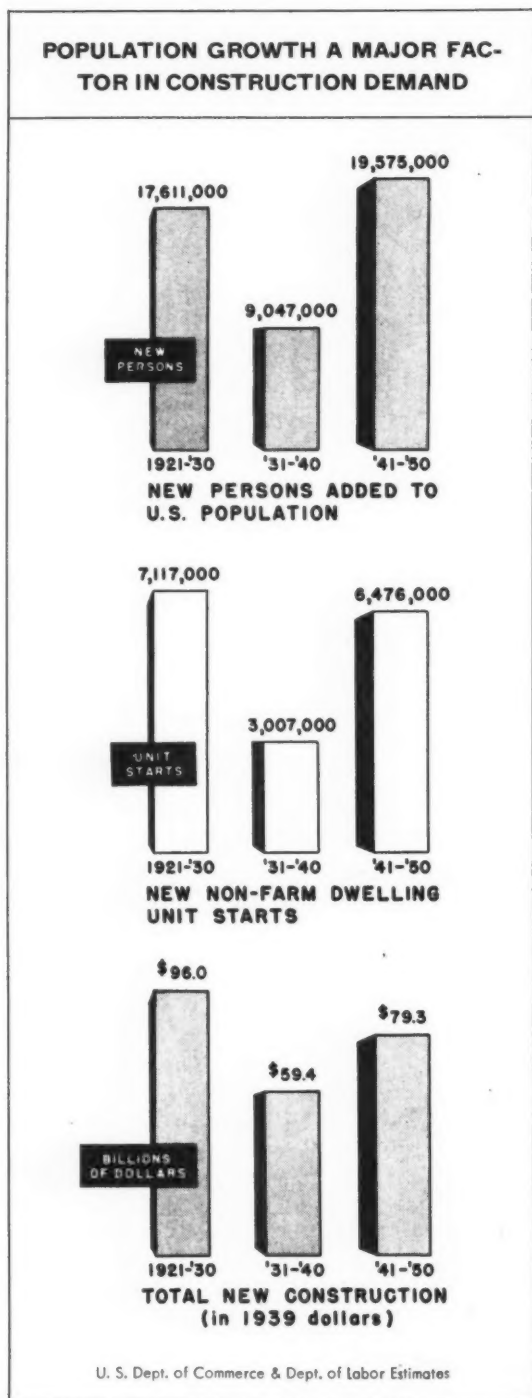


any decade up to that time — a period of healthy growth.

In contrast, the net gain of the 1930's was only 9,047,000, smallest for any census period since the Civil War decade. This marked decline from the 1920's resulted from: (1) almost complete cessation of immigration; and (2) a continuously declining birth rate.

The amazing trend change of the 1940's resulted in a population gain for the decade of 19,575,000 persons, breaking all previous decade records and confounding all those predictions of a trend toward stable population that were so widely believed during the 1930's and early 1940's. It was a change of great significance to building.

CHART II



## HOW MANY PEOPLE IN 1960?

The sudden population upsurge in the late 1940's so surprised the experts that they are now rather reluctant to predict future trends.

The Bureau of the Census published in August 1950 some advance figures which it called "illustrative projections." They were carefully calculated figures based on varying assumptions as to birth, fertility, survival and mortality rates. These calculations produced three sets of yearly figures for future U. S. population totals, culminating in 1960 estimates as follows:

	1960 Population total	Increase over 1950
"Low series".....	161,679,000	10,297,000
"Medium series".....	169,371,000	17,535,000
"High series".....	180,276,000	28,220,000

These increase figures are to be compared with actual 1940-1950 increase of 19,575,000. Since the "low series" and the "medium series" both assume fairly rapid declines in the birth rate and since the actual 1951 birth total was even higher than the "high series" estimate for 1951 births, it seems reasonable to the present writer to anticipate a 1960 population total will be over the "medium series" figure though perhaps not up to the "high series" figure. That is to say that a net gain in the range of 20 to 23 million, as compared to the 1940-1950 actual gain of 19,575,000, may be a reasonable expectation. Even this would involve a moderate drop in the birth rate from the 1951 level, a trend that seems to be widely anticipated by the experts.

For the purposes of this article it will be assumed that the 1950-1960 net increase will be 14 per cent, or about 21,236,000 persons. Naturally, any considerable variations from this figure would tend to modify the conclusions which will be hereafter stated.

## POPULATION STIMULATES CONSTRUCTION

Population growth is obviously a stimulator of construction demand in a dynamic society like ours. This proposition is quite strikingly illustrated in Chart II, which compares population net gains in the past three census decades with, first, numbers of new non-farm dwelling units and, second, with estimated overall construction volume. (Construction volume figures are all expressed in terms of 1939 construction costs, thus eliminating the effects of price changes from the comparisons.)

The 1930-1940 decade had only a little over half the number of new persons that were added in the previous decade; it had a 58 per cent decrease in number of new dwelling units and a 38 per cent decrease in total construction volume.

The 1940-1950 decade had a 116 per cent increase over the depression decade in number of new persons added to population; it had a 115 per cent increase in new non-farm dwelling units and a 33 per cent increase in total construction volume.

These comparisons illustrate an important relationship, although they do not, of course, provide any



mathematical formula for measuring the relationship.

An effort was made to work out such a measurement by the present writer over twenty years ago. A statistical study compared 1920-1930 construction volumes of rapidly growing cities with those of slow-growing and retrogressive (population-wise) cities. The study was presented before an annual meeting of the American Statistical Association and was published in the January 1932 issue of *ARCHITECTURAL RECORD*.

The purpose of the study was to determine the probable effect, on construction volume in the 1930-1940 decade, of the reduced population growth then anticipated. Result of the study was an anticipated decline of 16 per cent in total construction and a 28 per cent decline in residential construction, as between the decade of the 1930's and the decade of the 1920's. These estimated declines purported to measure only the effect of the changed rate of population growth; they assumed that construction to accommodate the needs of new population would decline but that construction to fill the needs of existing population would continue at previous rates.

Actual declines were much more severe than indicated in these advance estimates; this may be attributed to the fact that the analysis undertook to measure only one bearish influence on construction trends for a period when there were actually a number of other bearish influences of major significance. The conditions of financial collapse certainly had a major effect on construction demand in the 1930 decade of low population growth; and World War II certainly limited the extent of construction industry revival in the 1940-1950 era of rising population trends.

This early study is here cited merely to show that for at least twenty years consideration of the growth factors in the American economy (of which population is a major one) has been given great weight in all F. W. Dodge Corporation's analyses of construction trends. Growth is the primary creator of construction demand.

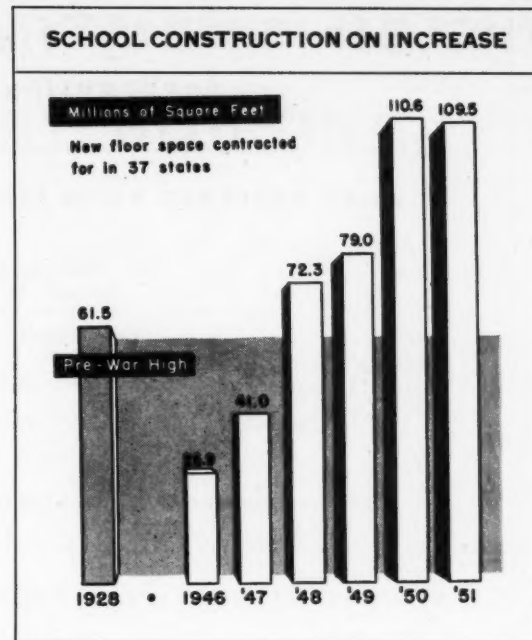
#### BUILDING FOR POSTWAR BABIES

The immediate building program for wartime and postwar babies is a school building program which has already reached boom proportions and promises to continue at boom levels for quite a spell ahead.

Educational building volume in the 37 Eastern states rose from a subnormal 25,883,000 square feet of new floor space in 1946 to a record-breaking 72,345,000 square feet in 1948, and continued its rise to 110,554,000 square feet in 1950; the 1951 volume was only held down to 109,490,000 square feet by reason of material shortages and government controls. (Chart III.)

Continuing demand for added school facilities is indicated in Chart IV, showing an estimated increase of school-age population (ages 5-17) from 31.6 million in 1950 to 43.1 million in 1960. Just now the elementary schools are booming and they will continue to boom through 1958, perhaps longer if the birth rate holds up. The high school boom will definitely carry over beyond 1960 and then will come the turn of the colleges.

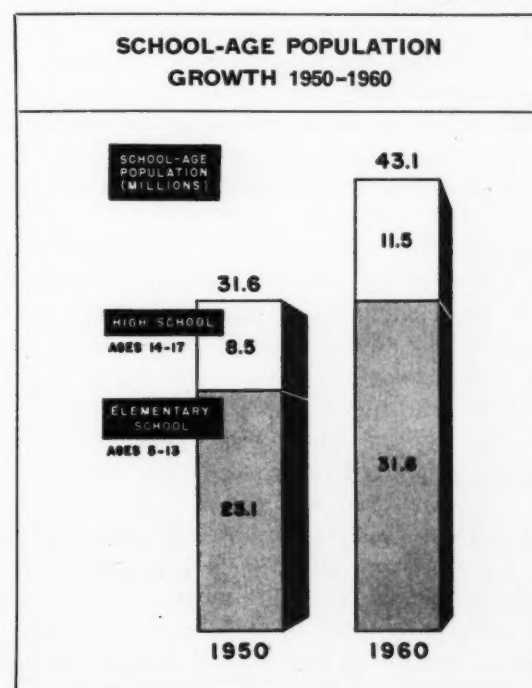
CHART III



Translated into building demand, the estimated requirement for the entire country is 600,000 new rooms in elementary and secondary schools by the end of 1958. This is the estimate of Ray L. Harmon, Chief, School Housing Section, U. S. Office of Education. The figure includes growth requirements, backlog requirements and normal replacement requirements.

Babies do not immediately require new houses. But, as they grow a little older and acquire little brothers and sisters, their parents are very likely to build on additions or even move into bigger houses. With pros-

CHART IV



**TABLE I**  
**CONSUMPTION EXPENDITURES**

A. WHAT HAPPENED FROM 1940 TO 1950						
	1940 Actual	1950 (required for 1940 standard)*	1950 Actual	1940-1950 Improvement		
Food.....	\$20.7 billions	\$ 50.3 billions	\$ 60.9 billions	\$10.6 billions		
Clothing.....	7.4 "	15.7 "	18.8 "	3.1 "		
Shelter**.....	9.2 "	13.2 "	19.9 "	6.7 "		
All Other.....	34.8 "	62.8 "	94.0 "	31.2 "		
Total.....	\$72.1 "	\$142.0 "	\$193.6 "	\$51.6 "		
* Consumption requirements for 1950 figured to take care of population and price increases.						

B. WHAT MIGHT HAPPEN FROM 1950 TO 1960						
	1950 Actual	Add 14% for more people	Suggested improvement at 1/2 1940-1950 rate	TOTAL		
Food.....	\$60.9 billions	\$ 8.5 billions	\$ 5.3 billions	\$ 74.7 billions		
Clothing.....	18.8 "	2.6 "	1.6 "	23.0 "		
Shelter**.....	19.9 "	2.8 "	3.3 "	26.0 "		
All other.....	94.0 "	13.2 "	15.6 "	122.8 "		
Total.....	\$193.6 "	\$27.1 "	\$25.8 "	\$246.5 "		
No estimate for changed price level between 1950 and 1960 is included in these figures.						
The indicated improvement in the third column has no forecasting significance, but is merely a suggestion of what seems to be in the range of possibility.						

\*\* Shelter expenditures include rent paid by tenant families plus estimated aggregate rental equivalent for home-owning families; these figures do not relate directly to capital cost of new housing.

perity they will want the bigger houses to have more spacious rooms as well as more rooms and to be generally better than the two-bedroom G.I. houses the first babies came home to from the hospitals. During the period of declining marriage rate there may be declining numbers of new minimum houses, but there are likely to be increasing numbers of bigger and better houses.

Along with the schools and the bigger and better houses will come demands for community facilities of all kinds, public and private. Water supply and electric utilities will have to be expanded; neighborhood stores and drive-in shopping centers will increase, public health and recreation facilities, churches and parish houses and Sunday school rooms will be required; in fact, every type of facility for civilized living.

The postwar babies will not actively demand increased highway construction but their somewhat older brothers and sisters will. Population aged from 15 years up will increase from 110 millions in 1950 to 124 or 125 millions in 1960. In 1950, more than half the population aged 15 up had drivers' licenses: fifty-nine million of them drove 49 million motor vehicles. There

will thus almost certainly be some millions more licensed drivers and some millions more registered vehicles by 1960. There is already a tremendous backlog of needed road construction; the nation's highway system has nowhere near caught up with the 60 per cent increase in existing motor vehicles that took place between 1940 and 1950.

Increased motorization will require, in addition to more and better hard-surfaced highways and parkways and turnpikes, revamping of street patterns, off-street parking spaces and parking garages, as well as all the other structures required to serve America's licensed vehicles and drivers.

However, the real key to the realization of all these potential construction programs and to the potential prosperity of our rapidly growing economy will be the nature and extent of future expansion of the country's productive facilities.

It is obvious that a 14 per cent increase in population requires a concurrent increase of, roughly, 14 per cent in total output of goods and services, if the 1950 standard of living is to be maintained for the people who will be here in 1960. (Continued on page 312)

# INDIVIDUAL APARTMENT HEATING FOR MULTI-STORY HOUSING

By Robert K. Thulman, Housing and Home Finance Agency, and  
Robert L. Davison, Howard T. Fisher & Associates

ARCHITECTURAL RECORD REPORT No. 2 on Housing and Home Finance  
Agency Research Project No. 1-T-99 with Illinois Institute of Technology \*

**R**EGARDLESS of what form housing may take, be it a huge slum clearance apartment building, a Greenbelt town consisting of a mixture of individual houses, row houses, and apartments, or a rural development of small farm houses, the fundamental heating problem is always the same. It is to provide heating equipment at a first cost consistent with the cost of the project, which, with reasonable care and attention, will maintain proper and acceptable comfort. And the operating and maintenance cost should be within the range of what the occupants of the project can afford.

This appears to be a simple problem, but when the heating engineer asks how much money he can spend, complications arise. From that time on, arguments, debates, and differences of opinion multiply with astonishing speed. When the heating engineer points out that excessive and poorly located glass areas make efficient and comfortable heating impossible, and that cheaply made windows will cause troublesome drafts, his remarks frequently fall on deaf ears. But when he translates window sizes, wall construction and infiltration factors into dollars and cents, the debatable points begin to clear up.

## How Heating Design Progressed

Conventional practice in the design of heating systems for multi-family and especially multi-story projects has undergone radical change in the past fif-

teen years. There have been sweeping changes in architectural design, and changes in heating have followed changes in architecture.

The heating system for the typical six-story apartment house of the 'twenties was a one-pipe steam job of the all-on, all-off type. Hot water was not considered practical in tall buildings because the hydrostatic pressure mounted as stories were added and soon exceeded the design limits of the boiler. The room temperature was controlled by simply opening and closing windows when the system was "all on," and by hammering on the steam pipes when the system was "all off." Boilers and radiators were generously sized to avoid complaints.

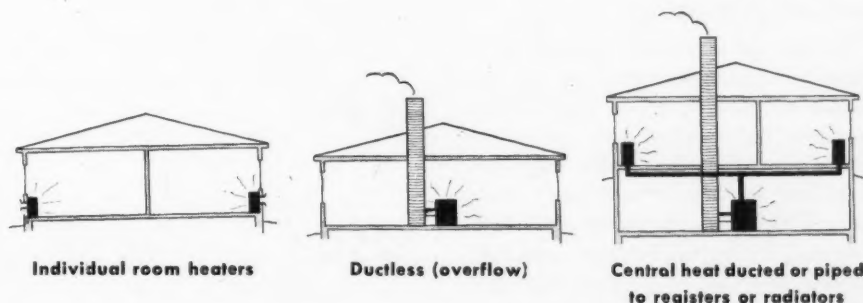
When two- and three-story "garden type" apartments began to be built, hot water systems were a practical type to use. (Hydrostatic pressures were within the limits of low pressure boilers.) The chief advantage was the temperature control provided by modulating the hot water supply. A "one-pipe" hot water system could be installed at a cost not much more than that for steam.

The principle of modulating hot water, or even steam, was not new.

Modulation of steam had been proposed by some progressive manufacturers and had been used in a number of more elaborate projects where the higher cost of high-vacuum pumps and appurtenances could be justified. But for the lower cost garden apartment typical of the 'thirties, hot water was just as good as modulated steam and quite a bit cheaper.

Although hot water systems were restricted essentially to three-story jobs (when all equipment was located in the basement), the need for strict economy in the multi-story project required a tight control over the cost of heating, and the "open window" method of temperature control couldn't be tolerated. It was in this type of job that the newer developments in modulated steam and vapor systems were applicable. Simplified distribution piping and continuous down-feed radiation offset much of the cost of the differential pumps required to operate vapor systems at sub-atmospheric pressures.

Hot water systems are feasible in high buildings and have been used more recently simply by installing efficient heat exchangers in the upper levels. With



Three types of heating systems used in single-family houses which might be profitably adapted for use in multi-story apartments

\* This article is based on a progress report on Housing and Home Finance Agency's Research Project No. 1-T-99 being conducted under contract by Illinois Institute of Technology, Prof. E. I. Fiesenheiser, Project Director, Howard T. Fisher & Associates, Inc., Architects and Industrial Designers, Subcontractor. The substance of this work is dedicated to the public. The accuracy of all statements or interpretations is solely the responsibility of the authors. Statements may be altered by further investigation before the project is completed.



## INDIVIDUAL APARTMENT HEATING SYSTEMS

automatically fired boilers, it is also possible to locate the heat generating equipment in an intermediate story or on the roof.

### "Overdesign" Can Make Central Systems Costly

The biggest hitch with central heating systems is that the equipment is expensive, but generally it is more durable, not susceptible to tenant "tinkering," and designed for a long term investment. Some costs are not always justifiable, as the heating system may be overdesigned: for example, controls are installed to translate the effect of wind and sunshine into temperature of the water, the design is too greatly refined, and materials are more durable than obsolescence requires.

There has been great improvement in automatic controls, especially those which modulate the temperature of the heating medium according to outside weather conditions. In fact, that improvement seems to have been carried to excess. Ideally, a control should limit the amount of heat delivered to the apartment to that required to maintain 70 F with the windows closed. The individual room radiators or convectors should be easily controllable by the tenant so that he can shut them off to cool an individual room, rather than open the window. The main point is that the central system *can be designed* to produce a satisfactory result in terms of both comfort and economy.

Designers of heating systems for apartments often are not familiar with the developments in heating for individual single-family houses. Some of the ideas now widely used for single-family house heating, and quite adaptable to apartment heating, are neglected for no better reason than that they may be considered too elementary. The need for exchange of ideas is apparent.

### Some Pros and Cons of Individual Heating

The use of individual heating units, either as room heaters or small systems similar to those used in single-family dwellings and supplied with fuel at the tenant's expense, has been proposed from time to time for apartment heating. (There may be some confusion between "individual heating" and "individual metering." Although individual metering implies individual heating, it would be possible to have individual meters on a central steam or hot water system.)

The study which follows, based on an investigation made by the St. Louis Housing Authority, indicates potential savings from individual heating *without* individual metering. There is a difference of opinion as to whether individual metering would result in added savings and whether these savings are socially justified.

The proposed use of individual heating systems in high buildings is relatively novel. Their actual use requires a re-orientation of some ideas fairly basic to the apartment vs. single-family-house types of living.

One of the reasons why people live in apartments is the economic one which motivates people to try to reduce their expenses by sharing them with others, the cost of heating by a central system, for example. Given equal living space and equally heat-resistant construction, it is obviously cheaper to heat that space which is in direct contact with other similar spaces than if it is in a separate shell of its own. And, usually, it is cheaper per heat unit to buy fuel in the large quantities required for an apartment house than the small quantities for single-family houses.

With individual heating, each tenant has the responsibility to keep his own apartment warm and not "borrow" heat from his neighbor. This situation is avoided when heat is paid for as part of the rent. There is some advantage to knowing in advance what the monthly costs of shelter will be and to spread the cost of heating over 12 months instead of over just the heating season.

There is also the health angle to be considered. In low rent housing, there is a social responsibility in protecting the welfare of the tenant. If he has his own heater, he may economize on fuel to an extent detrimental to his family's health.

These points favor central heating; other points are its proved acceptability,

predictable behavior, known costs, and durability. The proponents of individual heating stress the lower initial cost and opportunities to eliminate heat waste as the principal advantages.

### Study of Individual Heating in St. Louis

A comparative study of four types of heating made for the St. Louis Housing Authority indicated a 33 per cent saving in combined operating and carrying charges for heating and domestic hot water produced by individual systems, as compared with a central steam system (see breakdown of charges, p. 205).

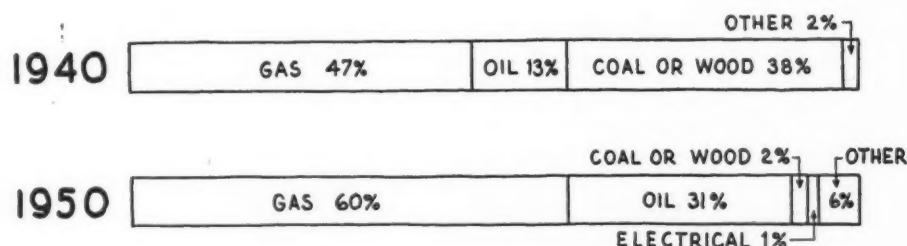
In the St. Louis study, gas was selected as the fuel for individual systems, and gas and oil for the central system. The individual heating systems are assumed to provide the same amount of heat and comfort as is provided with the radiator system. The fuel cost for the individual system is assumed to be eight per cent less than the central system, due to the elimination of transmission losses between boiler and radiator.

The principal savings are due to reduced cost of equipment and installation as reflected in carrying charges. Reduced labor for operation accounts for about one-third of the saving. Savings estimated for St. Louis are on a system *not having individual gas meters*.

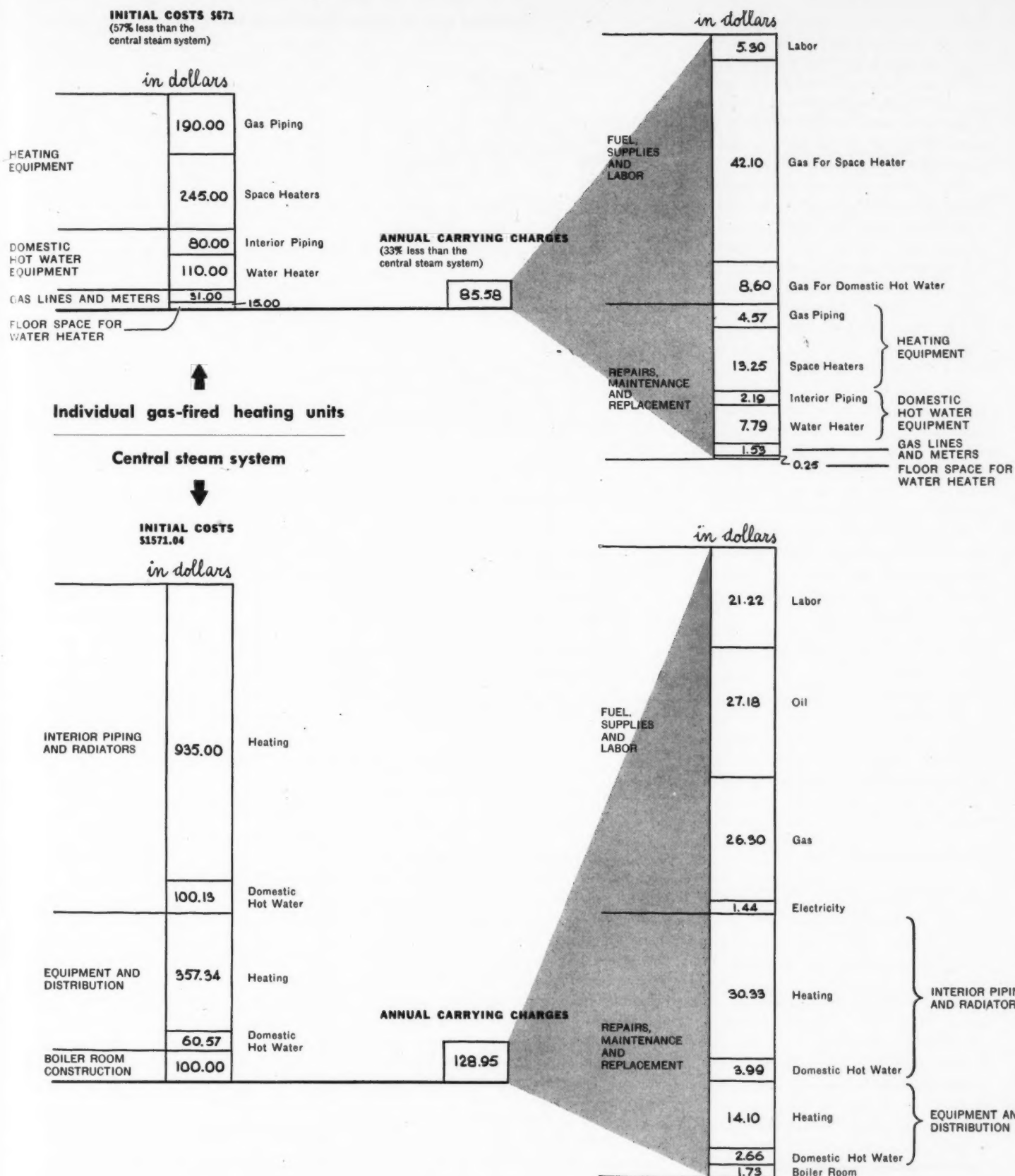
With individual meters, tenants will not waste hot water or heat. These savings are important, since heating frequently represents the largest single item of operating cost, and in subsidized housing may amount to 35 or 40 per cent of the rent charged. It is possible that this might be offset by gas rates higher than those for bulk purchase. Submetering, if permitted, might eliminate this objection.

### Potentialities of Gas Heating

Gas as fuel is not economical in all locations, but the extension of pipe lines



Types of fuel used for heating, classified as percentages of the total new homes built in 1940 and 1950. (Source: HHFA-RP-No. 129)



Cost of heating and domestic water heating for high-rise apartments. Comparative analysis between a central steam system with gas-and-oil-fired boilers serving 400-500 dwelling units each, and a system of individual gas-fired units for each apartment. This study was made by George Hellmuth Associates, architects, John D. Falvey, consulting engineer for the St. Louis

Housing Authority. Out of four systems compared, the system with individual units was the first choice but had to be temporarily ruled out because gas was not available. The steam system analyzed in the cost breakdown above was the second choice. The system with individual units consists of separate heaters for each room, except kitchen and bath

# INDIVIDUAL APARTMENT HEATING SYSTEMS

from natural gas regions, together with rises in cost of coal and oil, have resulted in a considerable increase in recent years in the use of gas for heating. The graph on page 204 shows the change from coal to gas from 1940 to 1950. Most of this increased use of gas has been in regions previously served largely by coal.

The increased use of insulation, together with the reduction in the size of single-family dwellings, has had an important effect on the type and size of heaters marketed and the fuel used; the size of heaters has decreased from a range of 120,000-70,000 Btu to 70,000-40,000 Btu. Heaters for apartments will drop these requirements to the 40,000-20,000 Btu bracket.

The reduction is possible because, with apartments above, below, and on both sides (except for corner apartments and the top floor), the surfaces through which heat is lost are reduced from six to two, and the large heat loss through the roof is eliminated.

With reduction in size and heat required per apartment, individual heating systems can be smaller, and fuel not practical previously may become the most economical to use.

It is obvious that all systems will not give the same degree of comfort, nor cost the same. The degree of refinement of the heating system should be related to the rental level of the particular project. When this factor is overlooked, the result is often a system too costly for a low rental project or one that lacks the refinements required by tenants in a higher rental project.

## Four Heating Types

In this article we will consider four basically different types of individual heating. These are outlined here as applied to the typical apartment plan shown in ARCHITECTURAL RECORD, December 1951, page 138.

**1: Single Overflow Heater per apartment.** (The term "Overflow Heater" indicates one that heats more than one room by flow of warm air through open doors without the aid of ducts.) The logical location for a single heater system would be the center of the dwelling, or as close to it as possible. This heater can operate on gravity or fan for circulation. Bureau of Standards tests in a one-story bungalow indicated that although the use of the fan changed the pattern of heat distribution, there was not very much difference in comfort.

Because of the central location of the heater, a vertical vent will be most practical.

**2: Separate Space Heaters located in each bedroom and living room under the windows and vented horizontally direct to the outside air.** This gives a better distribution of heat than Type 1. A heater would not be needed in the kitchen because, normally, the heat from cooking would keep this room warm. It would be desirable, though, to have a register opening between living room and kitchen, possibly incorporating a fan so that heat may be supplied to the kitchen when necessary.

Since air leaves the apartment through a power vent in the bathroom, warm air from the apartment will be drawn to this room; in some cases, a radiator may be connected with the hot water supply for the bathroom.

**3: Warm Air Duct System.** This combines the merit of warm air discharge under the windows with the economy of one central heater. There are two principal ways in which the air can be dis-

## Required size of space heaters has changed



The old-fashioned house without insulation required a large-capacity furnace



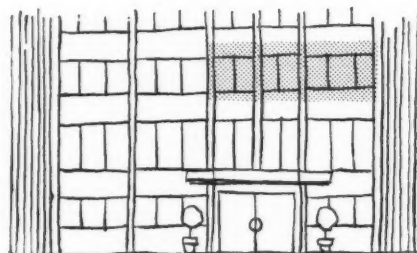
70-125 Btu



A modern well-insulated house does not require such large equipment



40-70 Btu

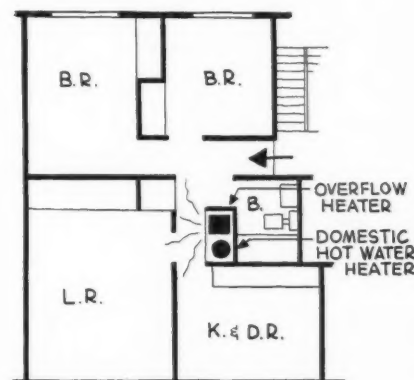


And a single apartment would require a still smaller unit

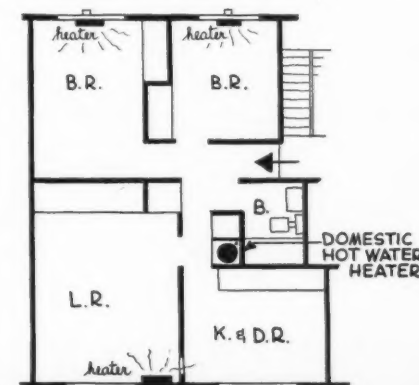


20-40 Btu

## 1. Single Overflow Heater



## 2. Separate Space Heater





tributed: by gravity, with the heater located on the floor below the apartment to be heated; or by forced circulation, with the heater within the apartment to be heated and with registers at floor or ceiling level.

For maintenance of the gravity system, there must be access to the heating unit through the apartment below, but in a rental project, this should offer no serious difficulty. On the other hand, the forced system would have higher installation and maintenance costs.

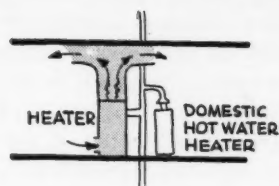
The air can be heated by a separate hot air heater or by connecting a heat exchanger with the domestic hot water heater, which would perform the dual function of providing hot air and domestic hot water.

**4: Radiators heated by Domestic Hot Water System.** If the domestic hot water heater is to be the source of heat for the apartment, it may be more economical to place the heat exchangers right in the rooms in the form of hot water radiators and to run a pipe system to them, rather than to have a heat exchanger heating the air to be carried to the rooms by ducts. The decision will depend to some extent on the type of floor system used. If the floor system provides spaces within it which can be used as ducts, the central heat exchanger may be more economical, but if the floor and ceiling system is not suitable as a duct system, it may be more economical to use pipes and radiators.

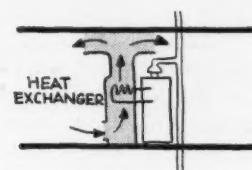
When the hot water heater is used for this dual purpose, it is advisable to have a 40- or 45-gallon storage tank instead of the 30-gallon tank used for domestic hot water alone, and the capacity of the heater ought to be about 45,000 Btu/hr. The cost of this type of system should be lower than that of the individual domestic hot water heater plus a space heater. It is absolutely essential, if the domestic hot water heater is also used for space heating, that the tank and radiators be made of noncorroding materials. A galvanized tank will rust when used for heating as well as hot water because the water temperatures will frequently be higher than when used for domestic hot water only, and galvanizing is not likely to stand up. Where there are appreciable quantities of lime in the water, a central water treatment apparatus should be installed to eliminate the lime.

The design of the system and the selection of equipment should be such that the combined cost is less than that of a central plant supplying both heat

## Two ways of heating air

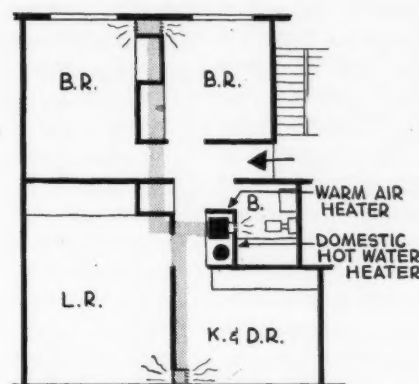


Space heater

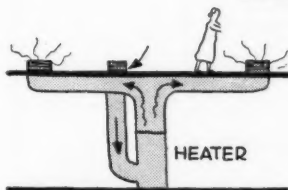


Heat-exchanger with hot water coils from domestic water boiler

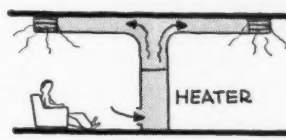
## 3. Warm Air Duct System



## Three ways of distributing warm air



Gravity, heater below floor to be heated



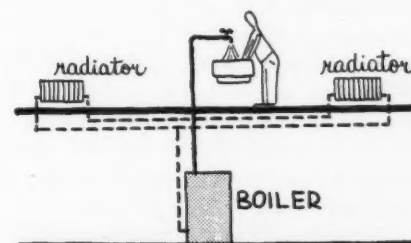
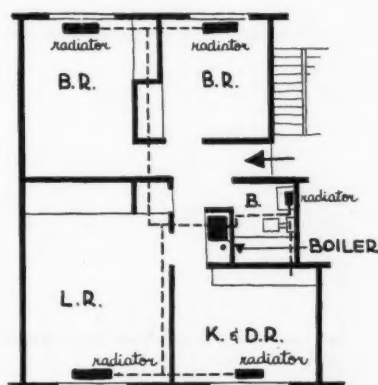
Forced air, ducts at ceiling



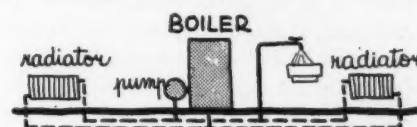
Forced air, ducts under floor

## Two types of hot water heating

### 4. Radiators



Gravity, boiler below floor to be heated



Forced, boiler within the apartment to be heated

## INDIVIDUAL APARTMENT HEATING SYSTEMS

and hot water. Durability of equipment also has an effect on overall cost.

**Labor Costs**

Labor costs for operation will probably be quite a bit lower with individual heating plants. This is particularly true in certain localities where union regulations and codes require that licensed operators of certain qualifications be employed to run a central heating system, even though the system may be designed and installed so as to eliminate the need for most attention.

In Chicago, for example, the cost of such personnel would average \$5200 per man per year. Three men (for three shifts) will be required to service a central plant for 300 apartments. Labor costs will vary with local codes, type of fuel, type of heating equipment, and size of project. The estimated labor cost in St. Louis for operating and servicing a central heating plant supplying 400 apartments (see page 205) is estimated at \$21.22 per apartment per year. In Chicago, the labor cost for the same size project (assuming four men required) would be approximately \$52 per apartment. Such costs should not be considered a valid reason for shifting to individual heating systems. This is a matter for the local citizenry to deal with through changes in legislation, but, still, as long as such conditions exist, they cannot be ignored by the budget-minded housing executive.

**Comfort Factors**

Individually heated apartments can be more comfortable than those heated by a central system. There are several reasons why this may be so. With a central heating system, the hours that heat is supplied may not meet the time schedule of all families. If a central hot water radiator system with modulated controls is used, it will frequently be found that the system is not responsive to requirements of all rooms since there are bound to be variations in exposure to wind and sun.

The central heating system, though, has become such an established symbol of comfort and housing progress that a return to individual heating systems, although refined by modern technology, may be slow in receiving general acceptance. It is often argued that the performance of individual apartment heating systems is inferior to central systems. This is due to the association of individual heating systems with the single centrally located overflow heater, which, obviously, cannot give as good distribu-

tion of heat as a unit in each room.

If heating units — be they space heaters, registers or radiators — are provided in each room adjacent to the windows, there should be slight, if any, difference in the pattern of heat distribution, no matter if the units are activated by an individual or by a central plant. Since there is little difference in comfort — with the exception of the overflow heating system — the question then becomes one largely of economics.

**Economics**

The economy of individual systems has many aspects. The St. Louis cost analysis shows a lower cost for individual heating in comparison with central heating. This is due largely to lower carrying charges because of lower initial cost. In the St. Louis Housing Project, there is a central gas meter, and the same amount of heat per apartment has been figured as with the central plant.

The unit cost of gas to the tenant, even if the gas is purchased wholesale and submetered by the landlord, will necessarily be higher than with a central meter since there would have to be

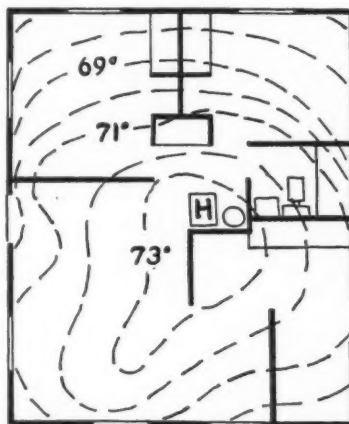
carrying charges on the meters and additional bookkeeping and collection costs. Whether this higher unit cost will be counterbalanced by the opportunity for savings which the tenant has by reducing waste (and maybe comfort), is an open question that may depend on rate structure, climate, type of building, location of the apartment in the building, and consumer habits.

Another facet in the heating cost to the tenant, a psychological one, is the fact that tenants have come to expect heating supplied "free" by the landlord (included in the rent).

**Comfort With Overflow Heaters**

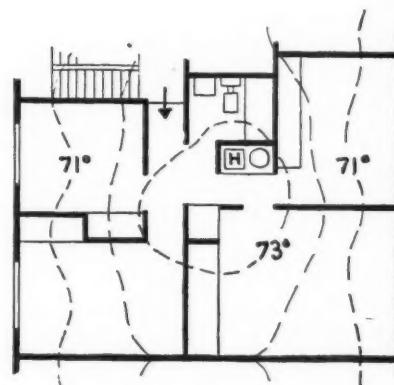
Where economy is paramount or climate is mild, overflow heaters may be found adequate for low-cost housing. With 48.2 per cent\* of all homes in the United States heated with space heaters, there may be justification for the opinion that a comfort condition acceptable for those Americans who pay for their own homes should be high enough for those who live in subsidized housing.

\* U. S. Bureau of Census — 1950 Census of Housing.

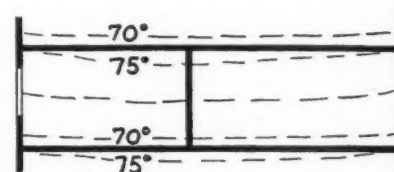
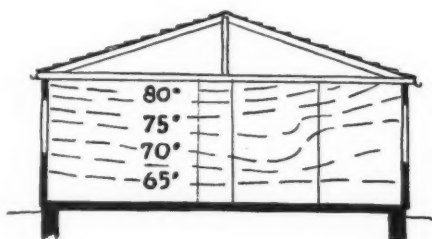


Heat distribution in a single-family house\*

\* From a study made in 1940-41 by I. M. Moriyama, under the direction of the Sub-Committee on the Hygiene of Housing, American Public Health Association



Assumed heat distribution in a multi-story apartment, 4 ft above the floor



Heat distribution should be better in apartments than in single-family houses. In a single-family house, the greatest heat loss is through the roof. Also, overflow heaters in houses do not adequately eliminate cold floors. In an apartment, surrounded by other heated apartments, heat loss through the ceiling is largely eliminated, and the floors are warm

It can be argued that an overflow heater should give more comfortable heat distribution in an apartment than in a single-family dwelling of comparable size and floor plan.

While the exposure is less in an apartment dwelling unit than in a single-family residence, the windows which might occur in two walls of one room in a residence, may be combined in an apartment into one big window. This may cause a reverse circulation of air cooled by the glass, and set up uncomfortable air currents across the floor. The effectiveness of overflow heaters depends upon the compactness of the plan, the distance between interconnecting rooms, the total load to be handled in relation to the heat loss of the space in which the heater is located, and the heat losses of the individual rooms adjoining the heater room. In other words, the house or apartment must be small, compact, and of low heat loss.

The FHA, in specifying the conditions under which overflow heating is acceptable, limits the distance between the center of the heater outlet and the center of any room heated by the overflow heater to 18 ft, limits its use to dwellings having a calculated heat loss of 45,000 Btu or less, and prescribes not more than one doorway and one arched opening between the heater and the adjacent rooms.

### Flues for Venting Gas-Fired Equipment

In the minds of most people, venting is still considered a serious obstacle to the use of individual heating in high-rise apartments. This is largely due to lack of information and experience on the vertical venting of individual gas equipment located on each floor. The American Gas Association, as a result of our research project, is conducting an investigation of this problem and expects to develop authoritative data for the design of individual and/or common vents.

The problem in tall buildings is not that of getting enough draft, but rather of preventing too much draft under certain conditions. Gas equipment operates on a very low negative chimney pressure, and since chimney draft varies with height, the average chimney temperature and the high stacks necessary in tall buildings are the most important problems. Assuming that the effect of excessive height can be overcome by lowering the gas temperatures, there is a serious problem of dealing with con-

densation, which, with fuel gas, occurs in the stack at temperatures of around 140 F.

One possible solution would be to design the vent as three independent vents, each three stories in height. The admittance of air at every third floor would prevent over-draft due to height of the building. This design is being considered by the American Gas Association as part of its study.

In buildings three or four stories in height, individual vents are often used. At first thought, one would assume that individual vents would take a great deal of space in a ten-story building, but since the individual aluminum vents need be only 4 in. in diameter, it is entirely possible to provide ten vents in a space 8 by 26 in., which is very little more space than required by a common vent. Since the vents can be constructed of .013 in. aluminum, the cost is nominal.

There is, however, a system suitable for immediate application, which has already been accepted by a number of building codes. This consists of a horizontal vent direct to the outside air for each individual heating unit. (This is the system that was intended for the St. Louis Housing Authority 7-story apartment. Also, the Los Angeles Housing Authority has plans for a 13-story building using this system.)

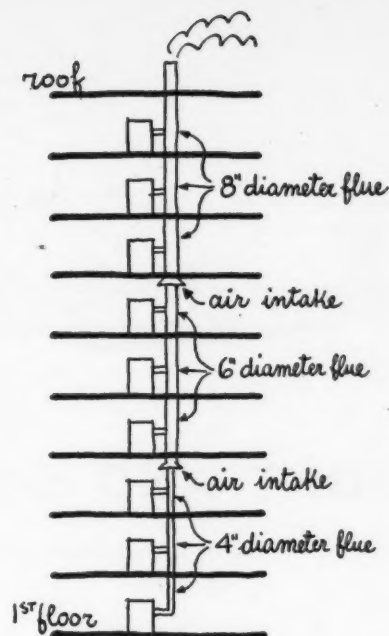
### Availability of Fuels

A limiting factor in many communities at this time is the availability of gas for residential heating. The St. Louis Housing Authority would have used individual gas heaters if gas had been available. Availability is dependent on supply and storage. Since peak heating loads may be only for short periods during the heating season, the facilities for storage may be a more important factor than production capacity or pipe lines. This situation is being rapidly altered.

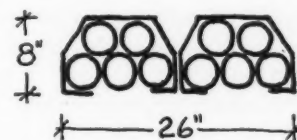
A project is under way in the Chicago area for storing gas in a natural underground dome of porous sandstone. This will have the effect of trebling the capacity to meet peak loads in this area.

One of the largest distributors of natural gas is putting in storage and pipe lines, which by 1955 will meet their anticipated residential demand.

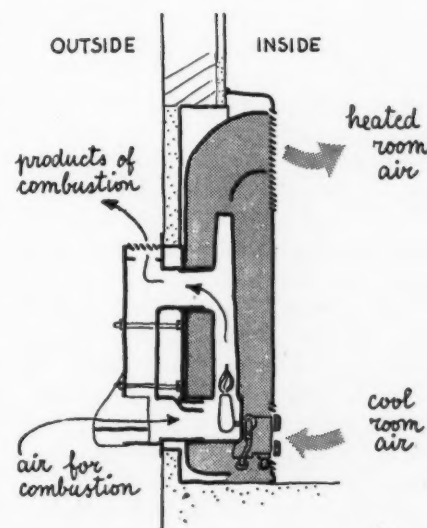
However, considering the potential economies which research so far has demonstrated, it seems certain that the next few years will see a wide use in apartment houses of heating methods which were formerly considered practical only for single-family homes.



Common flue for gas space heaters in high-rise apartments. This is a proposed design with air intakes every third floor to prevent excessive draft



Individual flues can be easily nested to save space. Ten single 4-in. flues—sufficient for individual heaters in a ten-story building—occupy only 1.44 sq ft



This individual gas room heater is vented directly through the outside wall





## LIGHT AND COLOR IN ELEMENTARY SCHOOLS

By N. L. Engelhardt, Jr., of Engelhardt, Engelhardt and Leggett, Educational Consultants

**C**ONSIDERABLE PROGRESS has been made in recent years in the lighting of elementary schools. Light is one element establishing the children's environment, and school planning today is concerned with the development of environment on equal terms with space and facilities. Ribbon windows, glass blocks, clerestory lighting, fluorescent lighting, color variations, and higher lighting intensities have all contributed to this progress.

The modern school program imposes a heavy burden on the eyes, not only in the extent and continuity of seeing, but also in the wide variation of task requirements. So it should be the aim of school planners to provide seeing conditions which will contribute most to the learning process and prevent harmful strain and fatigue.

Much work has been done in the attempt to determine optimum seeing conditions for school rooms. The emphasis has been on light intensities, reflection factors, brightness ratios, and color selection related to eye adaptability. How much light does the eye need to see? How much reflected light can the eye stand? What colors are most readily seen? Does inadequate light cause poor posture?

Unfortunately, some conclusions have been arrived at prematurely, without adequate research. Care should be taken to review carefully the character of research and the assumptions before accepting any "scientific" formulas.

Although many of the recommendations that prevail at the moment are based on analyses of physiological needs, there are those who feel that the psychological reactions are more important.

The visual comfort control of light source, intensity, and brightness contrast within reasonable limits appears to be valuable, but the adaptability of the human eye ranges far beyond the limits demanded in schoolwork.

Poor seeing, including lack of accommodation and definition, may be symptoms of individual difficulties requiring medical attention rather than alteration of the working environment. Poor seeing may also be caused by lack of interest. It has not been proved that, under reasonable conditions, lighting can correct poor posture or other physical defects, or cause any tremendous surge in the speed of learning.

### Determining Factors of Light

With these points in mind, let us consider the following factors in the determination of satisfactory light and color:

#### 1. Intensity of Illumination

The need is for different degrees of intensities with different tasks. The wide range of activities in elementary classrooms indicates the need for adjusting the lighting to correspond to the task. Examples: resting on the floor, reading, looking at motion pictures, playing games, building an airplane, studying plants, and acting in a play.

General illumination will be adequate if maintained at a reasonably low level, consistent with the principal tasks in the space. In elementary classrooms, 20 to 25 foot-candles are indicated. Localized light of higher intensity is desirable for such fine work as sewing. Science, shop, and art rooms should have somewhat higher intensities, especially if fine work is expected.

#### 2. Brightness Contrasts

Contrasts of three to one should be sought in the field of vision — a purely empirical ratio which is difficult to achieve in all situations. This ratio offers much latitude in classroom design. If ceilings have a reflective value of 85 per cent, walls might range from 30 to 70 per cent. With floors at 30 per cent, wainscot could assume almost any reflective value consistent with appearance and ease of maintenance.

The task should be brighter than the background. For example, a light map would be easier to see against a dark wall than against a light wall. An object may become merely a silhouette against a bright window, but it will be easily distinguished in detail against a background darker than itself.

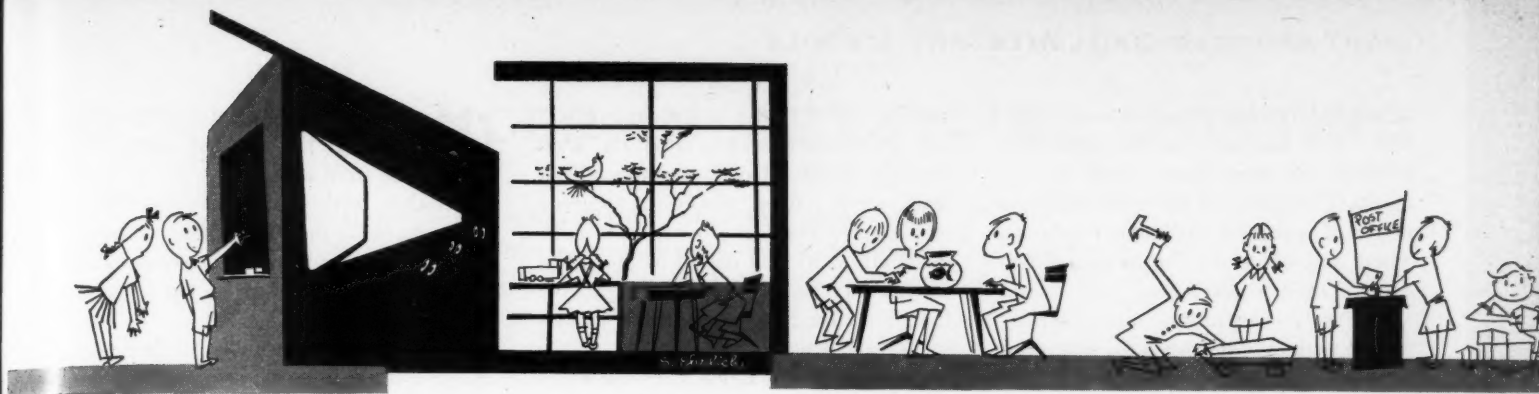
A dark wall is more restful to the eye than a bright one. When working at tasks requiring high intensity illumination, relief may be secured by glancing up at an area of dark wall. Bear this in mind when planning the color scheme.

Arrange bright surfaces and light sources above the eye in such a position that the eyebrows have a chance to function naturally as a blind.

#### 3. Reflection Factors

Brightness of walls, ceilings, floors, and equipment is related to their reflection factors and intensities of illumination. Where adequate natural light is available, the reflection factors of walls are less important than when limited light must be regained as much as possible by wall reflection.

Bilateral and clerestory lighting offer wide opportunities in wall color treat-



School activities vary widely, so the lighting must take into account each task rather than provide any overall standard of illumination

This article is a condensation of a chapter from the forthcoming book, *Planning Elementary School Buildings*, written by N. L. Engelhardt, Sr., N. L. Engelhardt, Jr., and Stanton Leggett and published by F. W. Dodge Corporation

ment. Lower ceiling heights in primary classrooms also make possible greater utilization of the ceiling as a major light source. The New York State Education Department has recently liberalized its regulations, taking cognizance of the potential of continuous artificial lighting and offering much freedom in design for natural lighting.

High intensity reflected light from walls may be overstimulating and irritating. Dark end walls, with a light wall under clerestory windows, would provide relief from continuous exposure to brightness.

### What Lighting Must Do

As already mentioned, no single activity can be chosen to indicate lighting needs in a classroom. It also appears axiomatic that no single horizontal plane can be chosen as the one for satisfactory conditions of seeing. Criteria for light intensity or quality at desk top levels have only limited meaning. Adequate light is needed on tables, window or wall counters, floors, and walls too, since various activities demand that pupils may face in any direction.

The visual problems in a classroom, from a strictly educational viewpoint, include the following:

1. There should be ample light to carry on the varied tasks. In some cases, particular locations can be set aside for certain tasks. In others, a given activity may occur anywhere within the room.
2. The light should have a pleasing quality. This includes attention to effective colors and the elimination of annoying glare or brilliant sources of light.
3. Sunshine, at suitable times and

for certain tasks, is highly desirable. But, it should be controllable.

4. Opportunity for pupils to look out windows is imperative. There is no proof that the educational values of observing sky, land, water, or man-made structures outside the school should be abandoned for reasons of subjective classroom lighting "standards."

5. Low cost is important, both initially and in maintenance and operation.

6. Both natural and artificial light should be readily controlled by the teacher to meet changing conditions and needs during the school day.

7. Informal and pleasant conditions should be created. High intensity and uniform illumination may hinder the development of these conditions.

### Standards of Foot-Candles

Many studies have been made in an attempt to arrive at standards for foot-candles of illumination in schools. It seems fair to state that, except in the most general terms, the results of the research are inconclusive.

An authoritative ophthalmological text

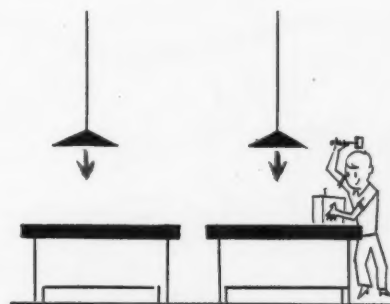
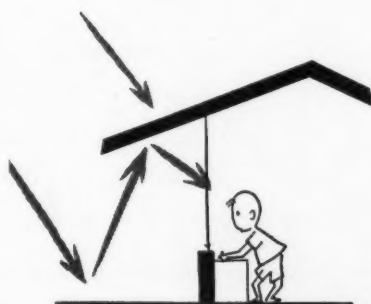
has this to say: "The pendulum has been swinging toward higher and higher standards of brightness for nearly all purposes. It seems to the author that it is swinging a little too far. It is true that daylight, out-of-doors, is often of a brightness of many thousand foot-candles; hence the eyes can stand extreme illumination. The point is that good results are possible with much less."\*

Researchers Carmichael and Dearborn made a comprehensive review of the literature on light intensity for a study of visual fatigue.† They point out that "there is a striking difference of opinion between experts on this matter." As a result of their studies, they chose 16 foot-candles for experiments in reading as the "best generalization from the experimental evidence available."

### Educational Activities Considered

In most of the research aiming to de-

\* Conrad Berens, M.D., Editor: "The Eye and Its Diseases"; W. B. Saunders Co.; Philadelphia, Pennsylvania; 1949; p. 90.  
† L. Carmichael and W. F. Dearborn: "Reading and Visual Fatigue"; Houghton Mifflin Co.; New York; 1947.





## LIGHT AND COLOR IN ELEMENTARY SCHOOLS

termine standards of classroom illumination, there has been no discrimination between the specialized needs in elementary schools and the quite different needs of secondary or higher schools. There are, obviously, important differences in light requirements.

The early years of schooling generally do not make the demands for attention to detail or fine work common in the classrooms of secondary schools. Nor do elementary years have the long periods of application to a specific task that is to be found in the higher grades.

Research studies and personal observation in classrooms throughout the country offer no evidence to support the need for more than 25 foot-candles, providing optimum conditions are achieved in other respects. Furthermore, it seems unnecessary to provide 25 foot-candles everywhere in the room. Rather, a range of lighting might well be provided, utilizing a general lighting level of 15 to 20 foot-candles with localized lighting for more intense illumination at specific points.

There is no indication that high intensity, natural light, near the windows, is harmful. With children in early grades, it appears to be quite all right for them to work at certain tasks on the floor or tables with the sunlight streaming in through the windows, provided they are not required to make frequent adaptation to dark. In other words, contrasts should be reduced by a high level of illumination throughout. In playrooms, corridors, cloakrooms, and locker rooms, sunlight is much to be desired.

Effective means of controlling sunlight should be installed. Venetian blinds are quite acceptable, but are dirt catchers and require maintenance. Fixed outriggers are used, but do not offer the variability that is desired. Overhangs are helpful. Baffles and louvers have been tried, but are more expensive and generally less effective than blinds. Shades, pulling up and down from the

meeting rail or center of the window, are also satisfactory but less adaptable than Venetian blinds. Recent research, with a new acrylic fiber material, suggests rather exceptional improvement in light distribution by the use of shades. The shades may prove to be less expensive than Venetian blinds and nearly as satisfactory in this respect.

Directional glass block will diffuse and bend the light rays upward, thus preventing the direct sun rays from entering the rooms. It has been found, however, that under certain circumstances, it is necessary to install shades or blinds with the directional glass block to avoid glare or extreme brightness when the sun is shining on the window wall and to permit darkening for audio-visual purposes. Although glass block transmits less light than clear glass, it does direct more light to the far side of a standard classroom.

Those who advocate the elimination of sunlight in elementary schools would do well to pay heed to psychological aspects, as well as light intensities. This does not imply that glass block is not useful. There are many places in a school where glass block can be used effectively and to advantage, but careful analysis of its purpose is required in each instance. Satisfactory classroom conditions can be obtained with clear glass giving a close tie to the outdoors.

### Brightness

The same difficulties are encountered with brightness as with intensity in attempting to lay down rules for optimum conditions. Empirical formulas are about all research has to offer at the moment. The adaptability of the eye to a wide range of conditions, the lack of evidence of fatigue within rational limits, and the indications of the importance of psychological reaction make difficult the acceptance of many recommendations that have become faddish lately. It may be that there is a tendency to go overboard in trying to develop a formula for an optimum static condition of lighting

when what we really need is a formula for variability to establish desirable divergence from a norm.

Another authority points out that: "Current in the lighting profession today is the theory that only an environment of uniform brightness is proper for safe and comfortable seeing.

"First of all, uniformity of brightness in an average interior is impossible of attainment, simply because it cannot be readily engineered. Secondly, no human sense — including vision — can respond consistently to fixed stimuli. Human sensations ebb and flow. . . . If overstimulation is troublesome, unrelieved monotony is hardly any better. Changes in the diameter of the pupil will take place even before an area of unvarying brightness. . . . Images on the retina, if held constant, will nonetheless fade in and out. Thus, if the lighting profession ever achieved its ideal of uniform brightness, it would have something definitely unnatural and disliked. Human eyes would be troubled rather than made content.

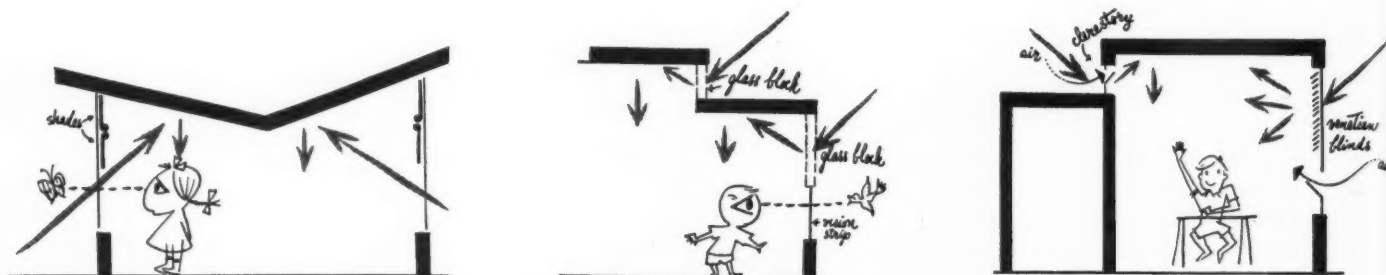
"Investigations clearly show that the eye may look *alternately* at moderately high brightness and low brightness without undue distress *if in each instance the major field of view is involved*. Trouble occurs chiefly when high and low brightnesses must be *concurrently*, rather than *alternately*, accepted. Hence, the theory of uniformity is not always valid, nor is there reason to accept it as some inviolable law of good seeing." \*\*

### Glare

Highly polished surfaces should be avoided since they produce specular reflection, which gives an image of the reflected object. Care in the design of light sources, the reduction of brightness contrasts, and the finishing of walls and equipment are essential in glare control.

(Continued on page 228)

\*\* Faber Birren: "The Ophthalmic Aspects of Illumination, Brightness and Color," *Transactions American Academy of Ophthalmology and Otolaryngology*; New York, New York; May-June, 1948.



Light and sunshine should be controllable to give adequate illumination and to suit the different tasks throughout the day. Windows should allow the pupils to look outdoors, so they will not feel confined



# ADVANCES IN ARTIFICIAL LIGHTING

Prize-winning installations at 4th International Lighting Exhibition vary from banks to museums and show trend toward more visual comfort by reduction of brightness contrasts

By John O. Kraehenbuehl\*

FROM May 6-9, the 4th International Lighting Exhibition and Conference was held in Cleveland, sponsored by the Industrial and Commercial Lighting Equipment Section of the National Electrical Manufacturers Association. A major feature of the exhibition this year and of two previous exhibitions in 1948 and 1950, was the display of award winning lighting installations. For the past three exhibitions, cash awards and certificates have been presented to members of the lighting and building industry, and to users of industrial and commercial lighting whose submitted designs were judged as being most outstanding during 1950-1951.

## Entries Appraised

By looking back over the winners of the three competitions, it is possible to follow advances in lighting design and the thinking of the lighting industry and related fields, since the entries are representative of the best in industrial, school, office, store, and miscellaneous installations covering street, airport, flood, recreational, protective, and special problem lighting.

The general trend in design has been toward more comfortable lighting sys-

tems using recommended foot-candles for tasks, and toward reducing the brightness ratios in the field of vision.

Although the quality of entries has advanced markedly, indicating a growing consciousness of the requirements for better lighting and the availability of better designed equipment, the entries seem to be stereotyped, lacking in originality and imagination. Most designs still showed a predominance of high foot-candles with acceptable quality rather than good intensity with superior quality.

In the designs of former competitions, the tendency was to replace incandescent equipment with fluorescent, while in the recent contest early fluorescent installations were replaced by newer fluorescent designs and luminous and louverall ceilings. The ceiling as a lighting unit is now taking a prominent place in the superior lighting systems submitted. This type of lighting and the judicious use of supplementary lighting as a complement to a good general lighting are present in those installations which indicate the greatest originality.

The trend in the six year period has been from an emphasis on foot-candles to a consideration of brightness. It is not

an exception to have the entry include a complete study of the brightness pattern, with many entries approaching the recommended one-to-three ratio within the field of the visual task.

Yet, there seems to be a total lack of attention to economic aspects. The entries do not show that the final installation is the result of a study of several adequate systems of high quality illumination, with the final selection representing one which gives the client the largest number of lumen-hours for the dollar cost. Customer benefits are always expressed in terms of emotional pleasure derived from the new installation, rather than from the economic benefits of sound business practice.

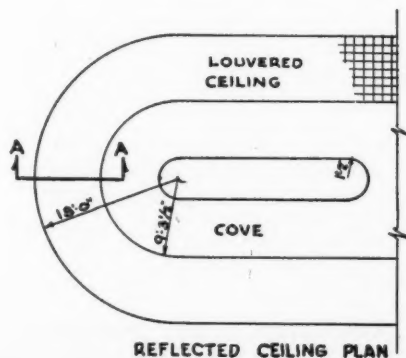
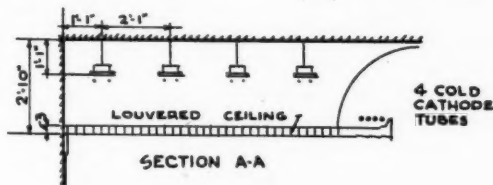
## Representative Installations

A few of the installations which received awards will be presented here. These representative installations are not necessarily the most outstanding, but were selected because they best demonstrate trends and practices.

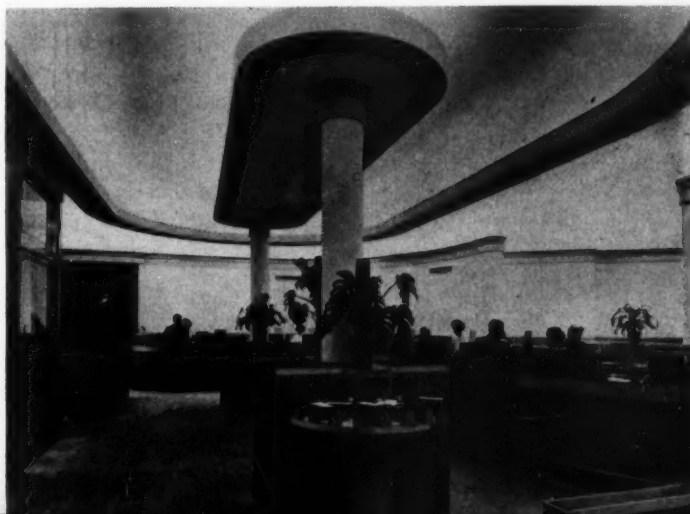
The bank installation (Figs. 1 and 2) departs from the usual pattern of equipment and uses built-in lighting which considers the area and shape of the room

(Continued on page 232)

\* Member of Merit Award Committee of 4th International Lighting Exhibition and Conference and professor of electrical engineering, U. of Illinois. Opinions expressed are those of the author, not necessarily those of the judges, nor of the National Electrical Manufacturers Assn.



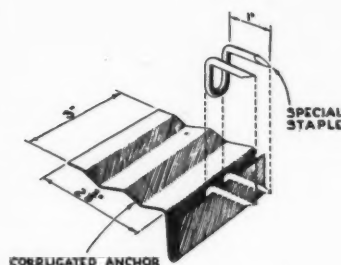
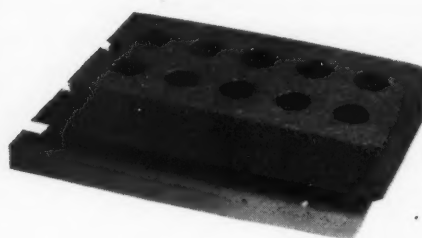
2



Bank lighting layout considers shape of room in combining indirect cove illumination with an egg-crate ceiling which has a higher intensity for work areas



The SCR brick is designed to form complete wall with no backing other than finishing materials. Specially planned slots and coring reduce weight, simplify laying and installation of windows.



A special clip (left) reduces labor and costs in furring. Anchor is placed in mortar bed, staple driven in wood strip. Below: typical wall of new units.

## NEW WALL, ONE BRICK WIDE

THE cost of masonry construction is expected to be considerably reduced by a new masonry unit, the "SCR brick" recently developed by the Structural Clay Products Research Foundation. The brick has a number of features which are claimed to reduce the erected wall cost to that of quality frame construction. At present, the unit will be marketed to replace 8-in. wall construction in homes of one and one-and-a-half stories. However, approval is expected in the near future for its use in buildings of several stories.

In appearance and face size, the unit is the same as standard Norman brick, and is available in the usual range of burned clay colors. Its basic dimensions (see table below) provide modular sizes when laid with 1/2-in. mortar joints, and will turn corners nicely. Vertical coring was introduced to lighten the weight, facilitate proper laying and make it easier to handle. Holes also permit entrance of mortar which keys unit in place.

A jamb slot at one end of each brick facilitates the installation of metal windows when mounted directly in the wall without a wood surround. The unit is designed for use with 2 by 2 in. wood furring on which interior surface mate-

rials and insulation can be mounted. This provides an adequate cavity to prevent moisture penetration, reduces number of nailing plugs required.

It is reported that a mason can lay 450 of the bricks per day — the equivalent of 100 sq ft of wall. The unit has the full approval of the bricklayers union, and has obtained favorable comments from a number of architects, such as the following by Philip Will, Jr., of Perkins & Will, "This new product . . . should help to produce more space, better appearance and improve construction at lower cost, yet recognizes the realities of building codes and traditions which still govern the building industry."

### Facts about SCR brick

Size: 2 1/8 by 11 1/2 by 5 1/2 in.

Weight: About 8 lbs.

Features: 1. Symmetrical coring: 10 holes, 1 3/8 in. diam.

2. Jamb slot in one end: 3/4 in. deep, 3/4 in. wide.

Typical U factors (with 2 by 2 in. furring):

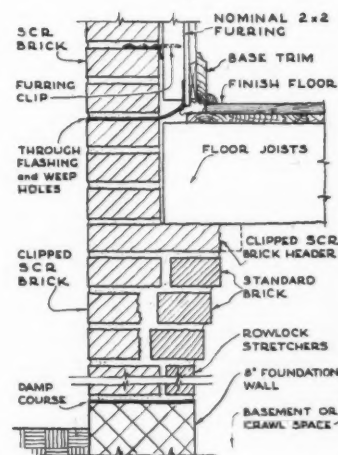
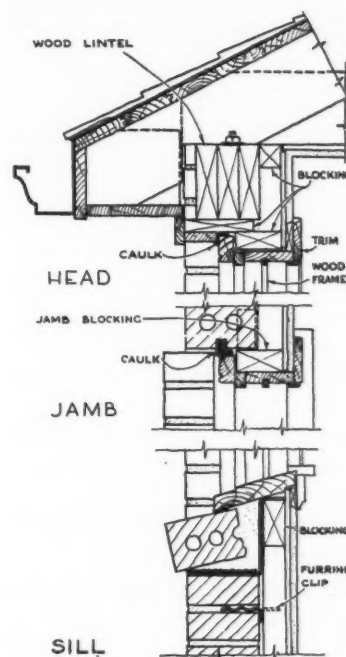
1. 1/2 in. insulating board lath;

1/2 in. vermiculite plaster; 1

in. roll insulation . . . 12

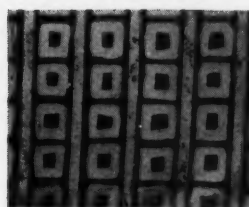
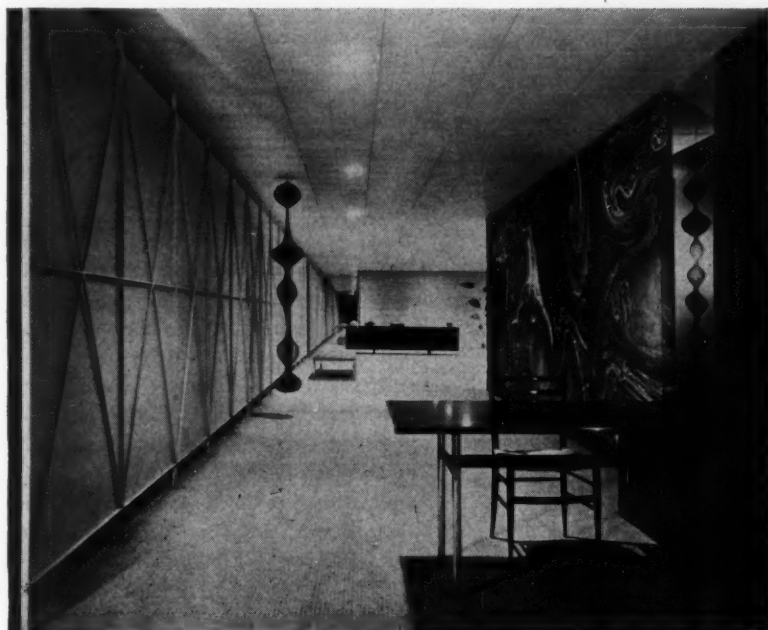
2. Metal lath; 3/4 in. gypsum

plaster . . . 40





## PRODUCTS for Better Building



Entrance to new showroom (far left) reveals mural as background for displays (Similar rug design won A.I.D. Award). Main room (above) has great effect of spaciousness. Left: fibreglas fabrics, "Rugged Square" and "Fugue" (Good Design selection) possess translucent effect (below). Leather slung magazine rack (bottom) is typical of Laverne designs

### SERVICE TO ARCHITECTS IN INTERIOR DESIGN PROBLEMS

*Laverne Originals*, source of many outstanding contemporary furnishings, including wallpaper, textiles, furniture and accessories, offers a special service to architects and interior designers in its "Architectural Research Unit." Working in an advisory and design capacity to assist the profession in problems of color, furniture and accessories, the group deals in both design and practical use — striving to provide intelligent solutions for individual needs and to bring about a greater cooperation between the architect, interior designer and design source. The firm's new showrooms are handsome examples of its work.

Constantly endeavoring to bring out new trends in the decorative line, Laverne has recently developed in its textile collection a new fibreglas material, which comes in a variety of handprints. This all-glass fabric is the result of the combined efforts of Laverne's Design unit and the Owens-Corning Fibreglas Research department. Possessing many qualities not found in the ordinary drapery material, it is completely fireproof, will help as insulation,

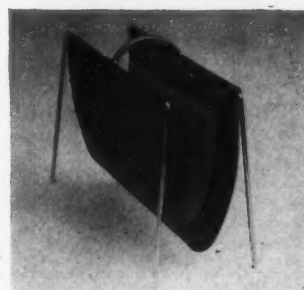
can be easily washed and requires no ironing.

Apart from the many wallpaper patterns — both individual and those coordinated with fabric — is the Marbalia Mural, an all-over, non-repetitive pattern in custom colors. Chosen by the New York Museum of Modern Art for the Good Design exhibit of 1952, the mural measures 21 ft long and 9 ft high.

Making effective use of leather, chrome-plated steel and Belgian marble, Laverne's furniture line combines simplicity with considerable elegance. Dining and occasional tables, benches, stools, and an interesting magazine rack are but few of the available items designed by the Architectural Research Unit.

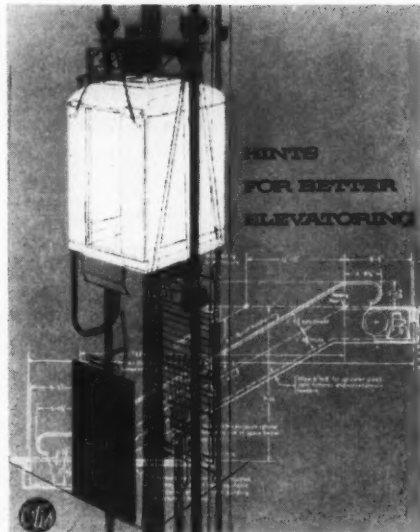
Mr. Laverne is currently sponsoring a fellowship program on the recently acquired Tiffany Foundation property on Long Island, giving young designers a free reign to work out their individual ideas. Their work is carefully gone over at the end of a given time and many of the results are consequently produced in actuality. Laverne Originals, 160 E. 57th St., New York 22, N. Y.

(Continued on page 246)





## LITERATURE FOR THE OFFICE



Booklet offers useful information relating to elevator system planning

### Elevator Planning Guide

*Hints for Better Elevator Planning.* Prepared primarily for students and for junior members of architectural and engineering staffs, this compact booklet outlines fundamentals of planning vertical transportation systems. Separate sections deal specifically with office buildings, retail stores, apartment houses, hospitals, transient hotels and industrial buildings. The booklet deals in each case with factors that must be considered in planning an elevator installation for the particular building type: building layout and structural requirements, elevator arrangement, operating systems and supervisory systems. Photographs, tables and schematic drawings are included, and recommended load capacities, platform sizes, hoistway sizes and door-opening dimensions are given. Information is also furnished concerning the planning of escalator installations. 28 pp., illus. Otis Elevator Co., 260 Eleventh Ave., New York 1, N. Y.\*

\* Other product information in Sweet's File, 1952.

### Electrical Equipment

*Fluorescent Ballast Tells Her Story.* Brochure gives the progress of fluorescent lighting, concentrating mainly on the ballast — without which fluorescent lighting would be impossible. All of the functions of the ballast are thoroughly explained, and a description of what happens inside a fluorescent lamp is given, illustrating the uses of the electrodes, the gas and the phosphor coating. Brochure contains detailed drawings and sketches. 16 pp., illus.

*Electric Power for Industry's Third and Biggest Expansion.* Booklet tells how to get electric power for quick expansion — on time, at low cost, with a minimum of critical materials. The planning, ordering and installation of packaged power equipment is adequately discussed and illustrated with photographs and technical drawings. Contains information on how industry can obtain better protection against power shutdowns and secure safety for personnel. 23 pp., illus. General Electric Co., Schenectady 5, N. Y.\*

### Concrete and Cinder Block With Marble Facing

*Marble Face Building Blocks for Interior and Exterior Uses.* Catalog illustrates standard types, features and typical installations of the manufacturer's product, which was described in detail in *PRODUCTS FOR BETTER BUILDING*, p. 192, May 1951, *ARCHITECTURAL RECORD*. Specifications are included. 4 pp., illus. Marble Face Blocks, Inc., 565 Fifth Ave., New York 17, N. Y.\*

### Automatic Conveyor Systems

*VMP Conveyors.* Catalog describes and illustrates with sectional drawings the manufacturer's conveyor system for both vertical and horizontal travel. Typical recent installations are also illustrated. 4 pp., illus. Virginia Metal Products Corp., Product Information Dept., 60 Hudson St., New York, N. Y.\*

### Electrical Planning Data

*Westinghouse Architects' and Engineers' Data Book, No. B-2161-E, 1952 Revised Edition.* New edition of this well-known book includes information on new equipment and new methods of using equipment, as well as an entire new section on power distribution. Each piece of apparatus is thoroughly described with illustrations, charts and technical data. Application, features, selection, dimensions and specifications are included. The book is designed so that detailed information on almost any type of electrical equipment is readily accessible. 330 pp., illus. Westinghouse Electrical Corp., 306 4th Ave., Pittsburgh 30, Pa.\*

### Clay Tile Applications

*Modern Industrial Washrooms, Cafeterias, Dispensaries, Kitchens; Booklet 300.* Full-color photographs illustrate several model installations of clay tile and point up the advantages to be gained by employing the material. Suggested color combinations are also included, and a diagram showing desirable features in washroom planning is included. 20 pp., illus. American-Olean Tile Co., Lansdale, Pa.\*

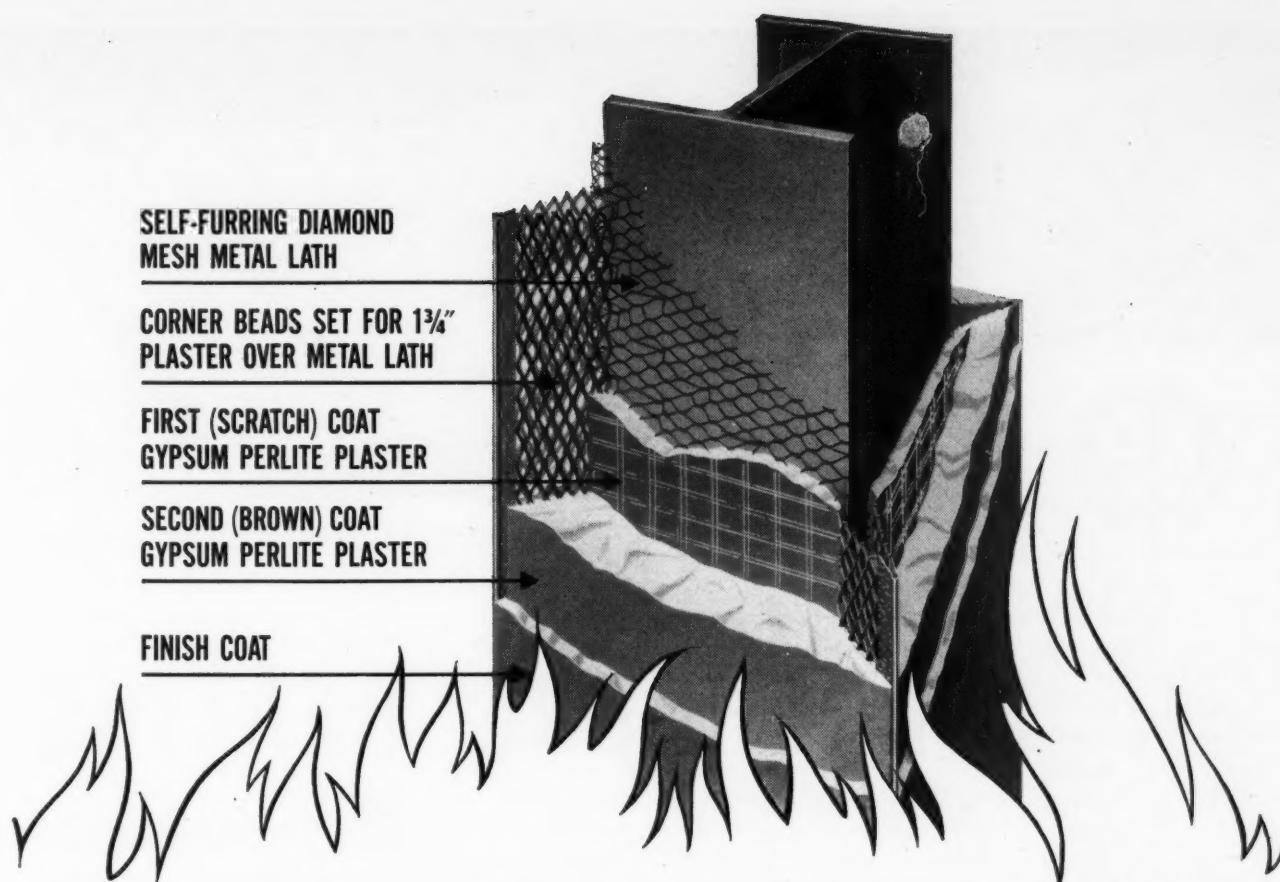
### Axonometric Drawing Tools

*Instrumaster Precision Tools.* Circular illustrates a line of drawing tools for three-dimensional drawing, including isometric protractors, two-angle and ellipse stencils and hatching stencils. 4 pp., illus. John R. Cassell Co., Inc., 110 W. 42nd St., New York 18, N. Y.

### Wrought Iron

*Proof By Performance.* Durability and corrosion-resistance of wrought iron in construction and piping is illustrated in this booklet with actual case histories of specific installations of the manufacturer's products. 8 pp., illus., A. M. Byers Co., Clark Bldg., Pittsburgh 22, Pa.\*

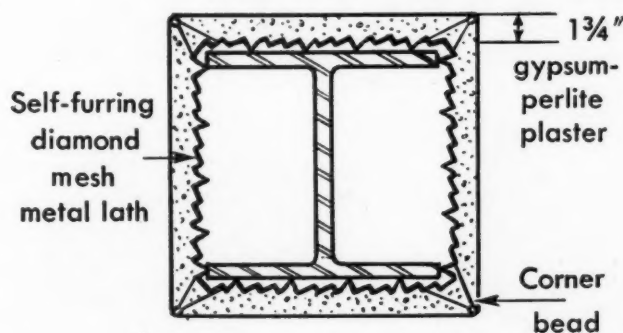
(Continued on page 304)



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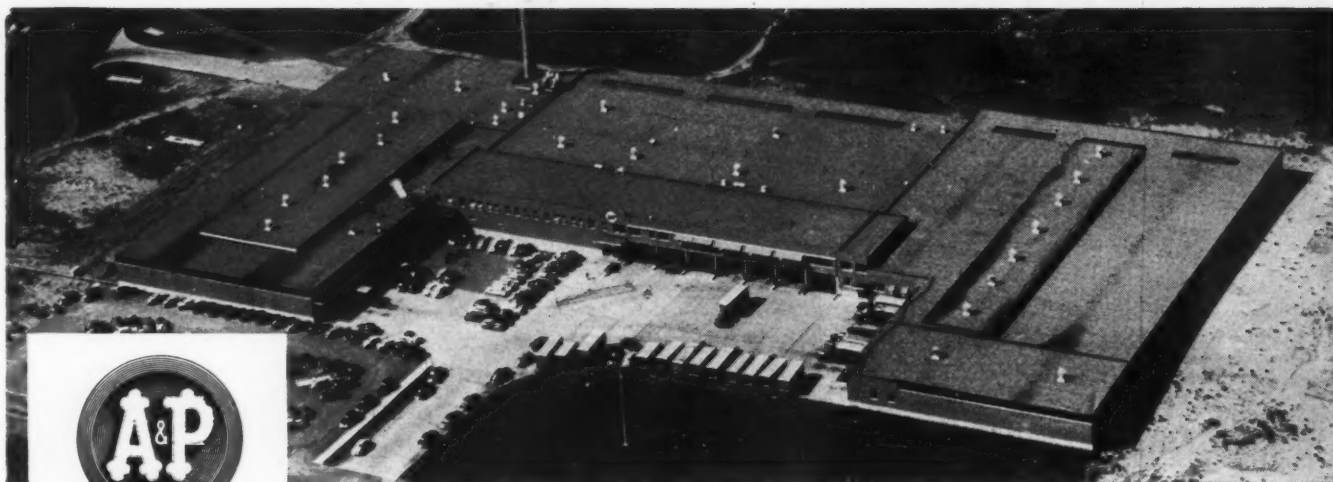
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# PLANNING OCCUPATIONAL THERAPY DEPARTMENTS IN HOSPITALS: I

By Alonzo W. Clark, A.I.A., with the collaboration of the American Occupational Therapy Association

The increasing recognition of occupational therapy as an integral part of the medical rehabilitation program has resulted in its becoming an increasingly important element of hospital planning. The following Time-Saver Standard sheets present a summary of the recommendations of the American Occupational Therapy Association on the planning of typical occupational therapy departments. These basic plans and discussions were developed to serve only as guides for designing similar units, and will not be universally applicable without some modification. This material was presented at length in the October, 1950, issue of *HOSPITALS, Journal of the American Hospital Association*. Reprints of this article, which contains extensive equipment and supply lists for planning storage are available from the American Occupational Therapy Association, 33 W. 42nd St., New York 36, N. Y.

**BASIC SOLUTIONS** for occupational therapy departments are largely dependent on the following factors:

**1. Number of patients to be treated.** On the basis of hospital surveys and committee recommendations, it was agreed what 30 per cent of hospital patients should normally be referred for occupational therapy. About 40 per cent of these would be treated in the clinic, and 60 per cent treated in their beds or on the wards. One occupational therapist in the clinic can generally accommodate about 15 patients in each of two daily sessions, one in the morning, one in the afternoon. This number will vary according to the type of patient—more psychiatric patients, fewer physically disabled patients.

**2. Floor space required by patients.** Approximately 54 to 61 sq ft per patient is recommended for the entire department, including clinic, office and storage. For the clinic alone, 42 to 47 sq ft per patient is suggested to allow for easy circulation and use of equipment. These figures are based on a study of the needs of a typical department.

**3. Types of treatment media to be used.** Some 70-odd activities are

used in occupational therapy departments throughout the country. Basic requirements for small units are as follows; these should be expanded for larger units:

1. *Bench work*—carpentry, plastics, metal work including painting and finishing of completed projects.
2. *Table work*—leather, blockprinting, fly-tying, sewing and art work.
3. *Loom work*—weaving, braiding.
4. *"Functional equipment"* (not an active classification)—bicycle jig saws and other adapted equipment for treatment of physical disabilities.

*Storage facilities* should provide for at least 3 months' supply, as many institutions order on a quarterly basis. All the above items must, of course, be adapted to suit a particular type and size of hospital.

**4. Location of the department in a hospital.** Daylighted space as close to patient areas as possible and readily accessible to toilet facilities is recommended. Proximity to the physical therapy department is advisable. Necessary facilities include running water, gas, and electric outlets; dust collectors for power woodworking tools are recommended.

## THE SMALLER UNIT

For hospitals up to a 250-bed capacity, a basic plan was evolved as shown on Sheet 2. At the rate of referral cited, up to 30 patients should be accommodated. These could be cared for by one therapist, with a possible second therapist for ward service. On the basis of 15 patients per session at 54 sq ft per patient, the entire unit was allotted 813.75 sq ft. (17½ by 46½ ft). The clinic area, planned at 42 sq ft per patient, totals 638.75 sq ft (17½ by 36½ ft). The minimum basic activities were provided for with 20 work stations for flexibility in selection. Activities requiring bulky equipment such as printing and advanced ceramics were omitted. It was assumed that preparation and finishing could be done in the clinic or on a counter top in the storeroom. The following considerations were made for the three specific areas within the department:

**1. Clinic area:** The first obvious requirement is space for free circulation around the required equipment (see general list on Sheet 2). Space for parking at least 3 wheel chairs is also necessary. Double doors at shop entrance simplify moving equipment and supplies. Sliding doors for upper cabinets avoid interference with patients working at counter tops. No display case for finished articles was included as it was felt that this emphasized the product rather than therapeutic objectives.

**2. Storage area:** Space was provided for a mobile cart for servicing ward patients. A cabinet with work top was included for preparation and finishing work. It was assumed that only 8-ft lengths of lumber and plywood would be stored in this basic unit, and that other closets, rooms, etc. in various parts of the hospital could be used for "dead storage".

**3. Office area:** Space was provided for the usual office furnishings. A large glass panel in front of the desk facilitates control and supervision of the unit.

## VARIATIONS FOR HOSPITAL TYPES

The basic plan is directly applicable to *psychiatric* and *general medical and surgical hospitals*. In the latter case, a bicycle jig saw is recommended in place of a drill press stand (a table model drill press could be used).

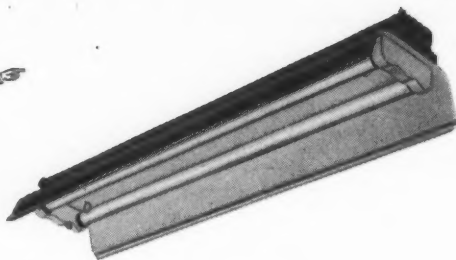
**Tuberculosis hospitals** require two minor changes: replacement of one floor loom and the braid-weaving frame with two industrial sewing machines.

**Pediatric hospitals** need the following changes: a plan adaptable to division into two parts—one for small children, one for adolescents. For equipment changes, see plan. Tables should adjust in height.

**Physical disability hospitals** can use the basic plan with a few variations in equipment. Although fewer patients can be treated per therapist, fewer will be able to come to the clinic for treatment; a second therapist will be needed for treatment in the wards.

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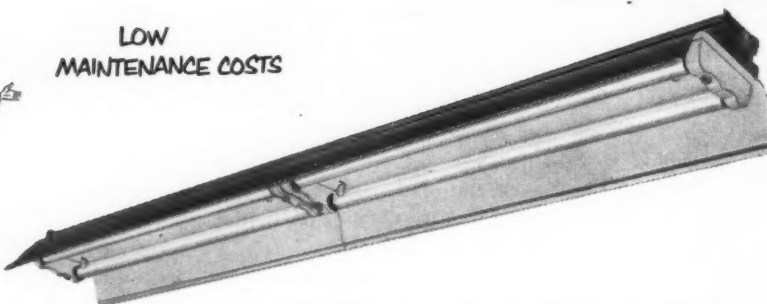


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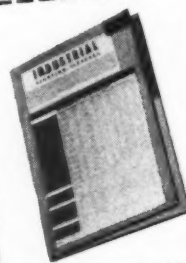
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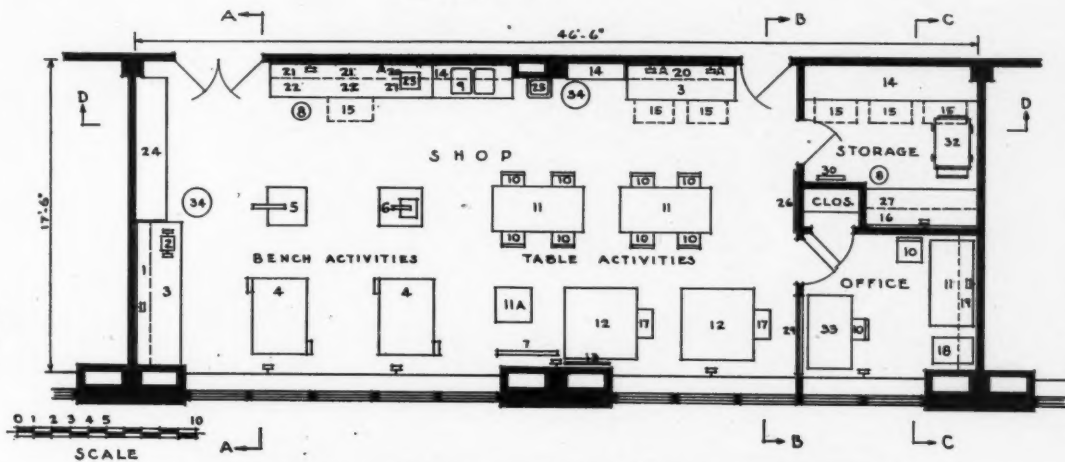
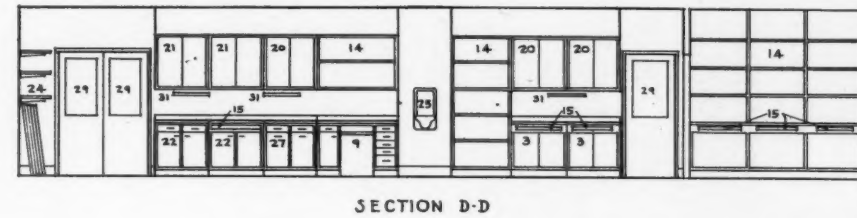
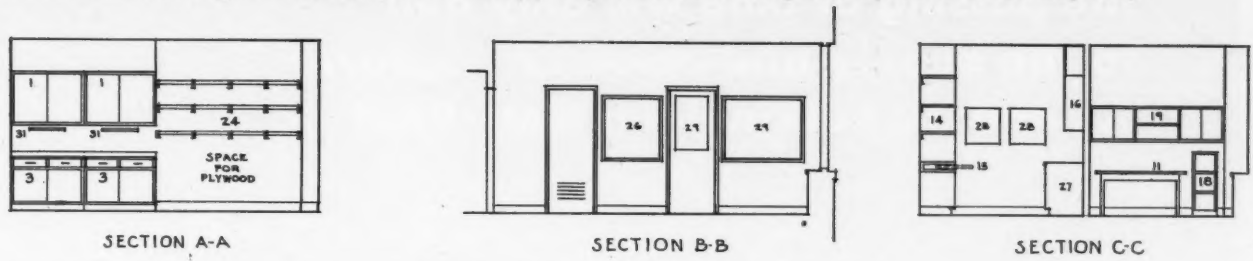
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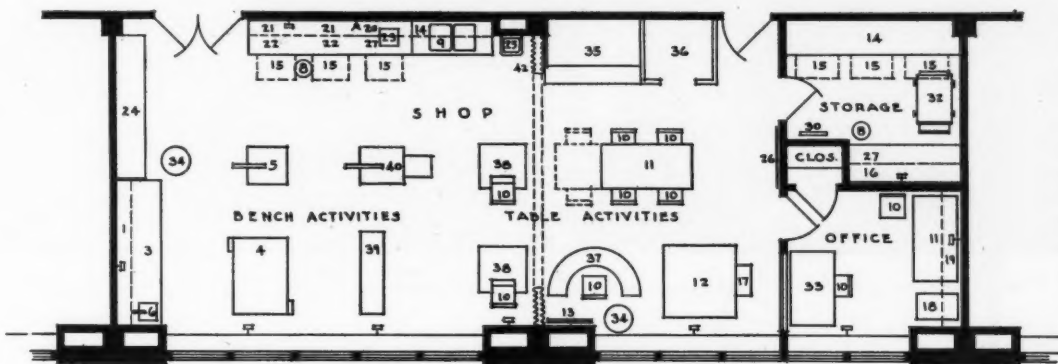
# PLANNING OCCUPATIONAL THERAPY DEPARTMENTS IN HOSPITALS: 2

By Alonzo W. Clark, A.I.A., with the collaboration of the American Occupational Therapy Association

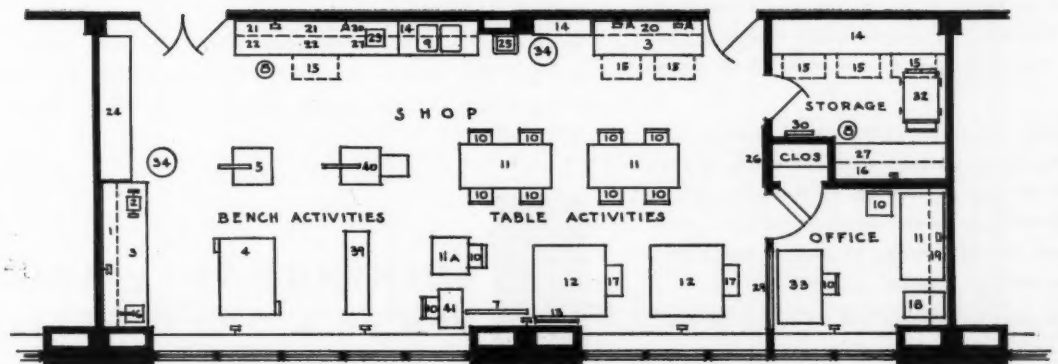
Floor Plans For Typical Occupational Therapy Departments in Hospitals Up To 250 Bed Capacity



Basic plan for psychiatric, tuberculosis and general hospitals



Plan adapted to physical disabilities hospitals



Plan adapted to pediatric hospitals

## LEGEND

1. Shadow board cabinet
2. Electric tool grinder
3. Tool storage and work bench
4. 2-man bench
5. Electric jig saw
6. Drill press
7. Weave frame
8. Step stool
9. Stainless steel sink
10. Chair
11. Table—11A. Adjustable table
12. Floor loom
13. Warping board
14. Open shelving
15. Pull-out shelf
16. Storage cabinet
17. Bench for loom
18. File cabinet
19. Book shelf and cabinet
20. Tool cabinet
21. Paint cabinet
22. Finishing bench and cabinets
23. Electric hot plate
24. Lumber rack
25. Drinking fountain
26. Bulletin board
27. Storage bins and work bench
28. Table loom
29. Glass panel
30. Ironing board
31. Fluorescent light
32. Ward cart
33. Desk
34. Trash basket
35. Sand box
36. Play house
37. Circular table
38. Cut-out table—adjustable
39. Power lathe
40. Bicycle jig saw
41. Treadle sander
42. Accordion type folding door
43. Large kiln
44. Small kiln
45. Damp closet
46. Potters wheel
47. Imposing table
48. Type cabinet
49. Printing press
50. Electric circular saw
51. Typewriter table
52. Electric belt sander
53. Electric disc sander
54. Sewing machine



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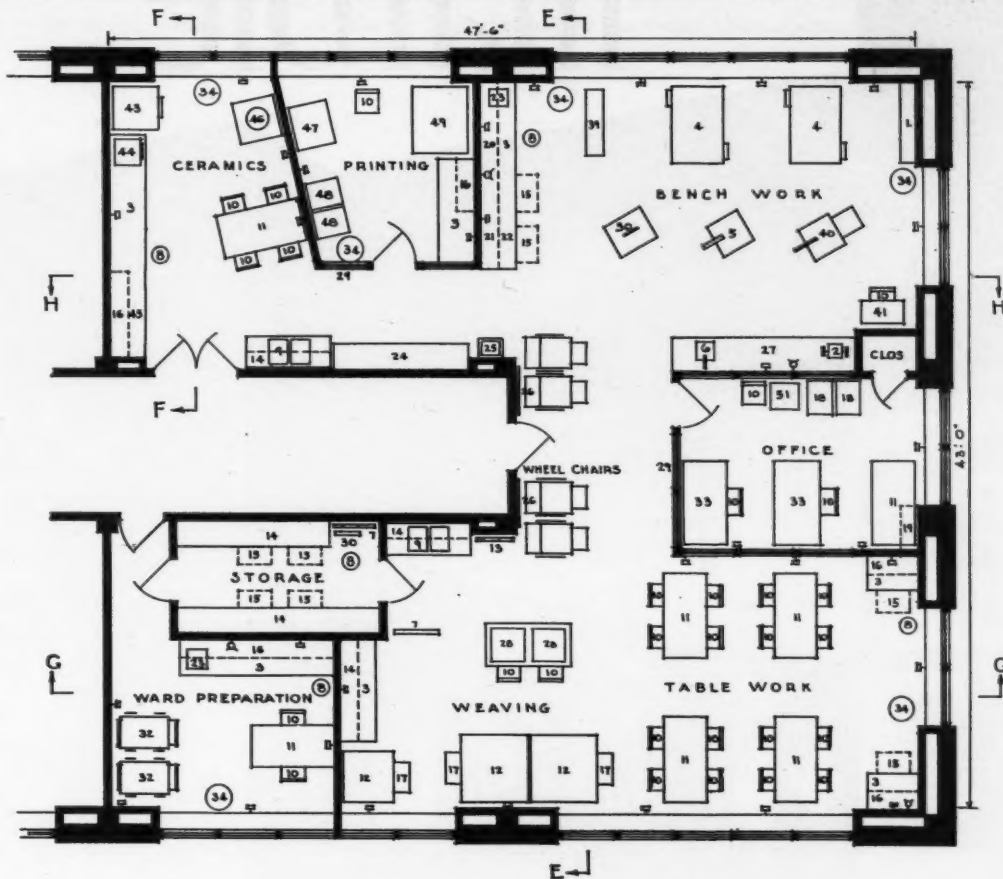


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# PLANNING OCCUPATIONAL THERAPY DEPARTMENTS IN HOSPITALS: 3

By Alonzo W. Clark, A.I.A., with the collaboration of the American Occupational Therapy Association

Floor Plans For Typical Occupational Therapy Departments in Hospitals Up To 500 Bed Capacity



## LEGEND

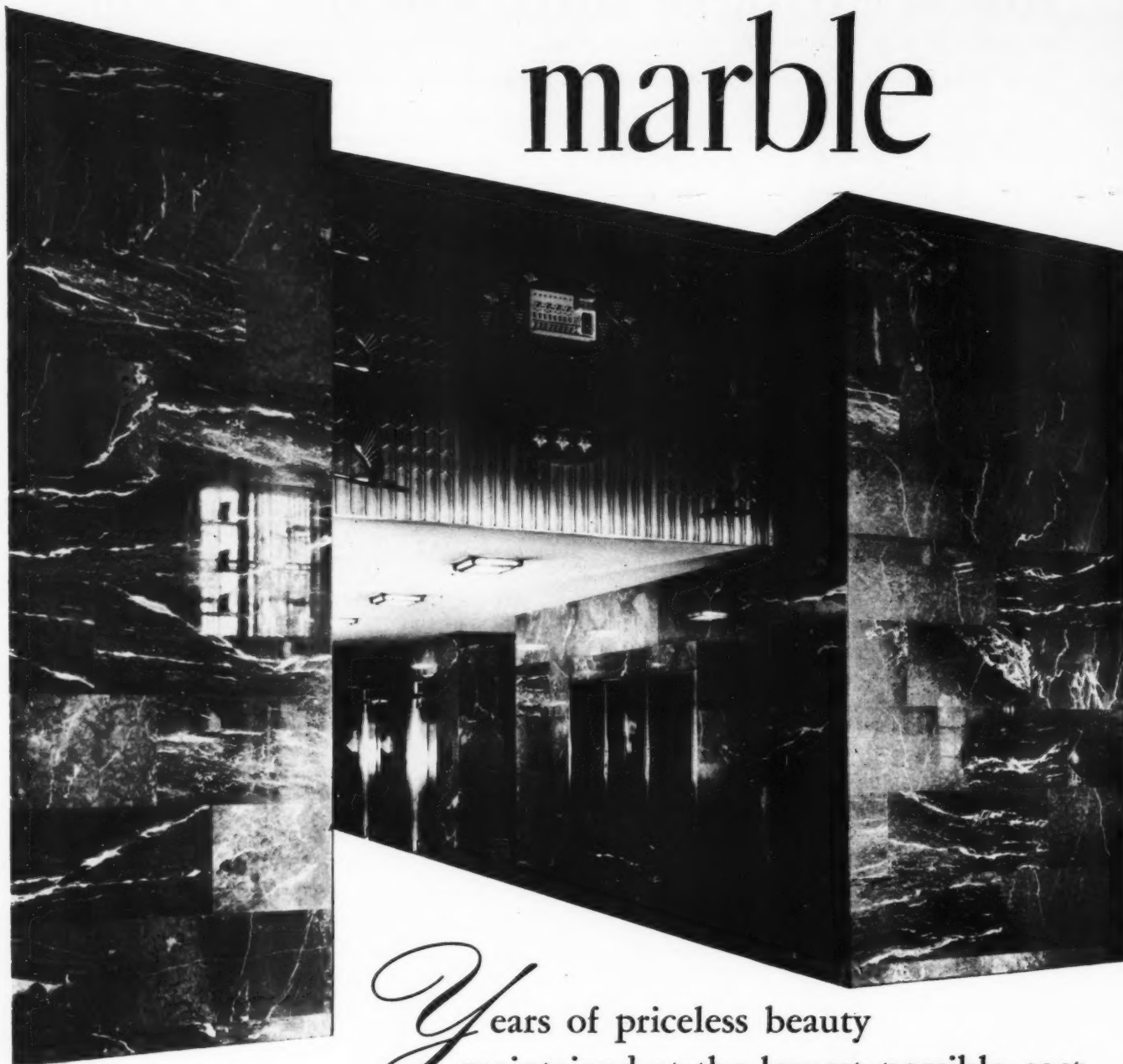
1. Shadow board cabinet
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48. Type cabinet
49. Printing press
50. Electric circular saw
51. Typewriter table
52. Electric belt sander
53. Electric disc sander
54. Sewing machine

Plan for psychiatric, physical disability and general hospitals



Plan adapted to tuberculosis hospitals 300 to 500 bed capacity

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# PLANNING OCCUPATIONAL THERAPY DEPARTMENTS IN HOSPITALS: 4

By Alonzo W. Clark, A.I.A., with the collaboration of the American Occupational Therapy Association



Room Sections for Typical Occupational Therapy Departments in Hospitals Up To 500 Bed Capacity (See Sheet 3 for Legend)

## THE LARGER UNIT

A basic plan for a typical occupational therapy unit for large hospitals of approximately 500 beds is shown on Sheet 3. Again using the same basis for rate of patient referrals to the department (30 per cent of rated bed capacity), the large unit should accommodate 150 patients a day. The actual clinic load would be 60 patients (40 per cent of 150), or about 30 in each of two sessions.

The unit as presented was planned on the basis of 31 patients. Using 61 sq ft per person, the gross area allotted the entire unit is approximately 1,880 sq ft. Net area of the clinic is about 1,450 sq ft, or 47 sq ft per person.

This increased space per person over that allowed in the smaller unit is the result of adding two activities requiring bulky equipment and sepa-

rate rooms. These are ceramics and printing. It was also deemed essential to have a separate ward preparation room to serve the increased number of ward patients. To allow for a necessary dispersion factor, 10 extra work stations are provided in the clinic. The larger unit therefore contains the following sections:

1. Clinic, including weaving and table activities area, bench activities, printing unit, ceramics unit.
2. Office.
3. Storage.
4. Ward preparation area.

Three therapists plus three assistants could run clinic and wards.

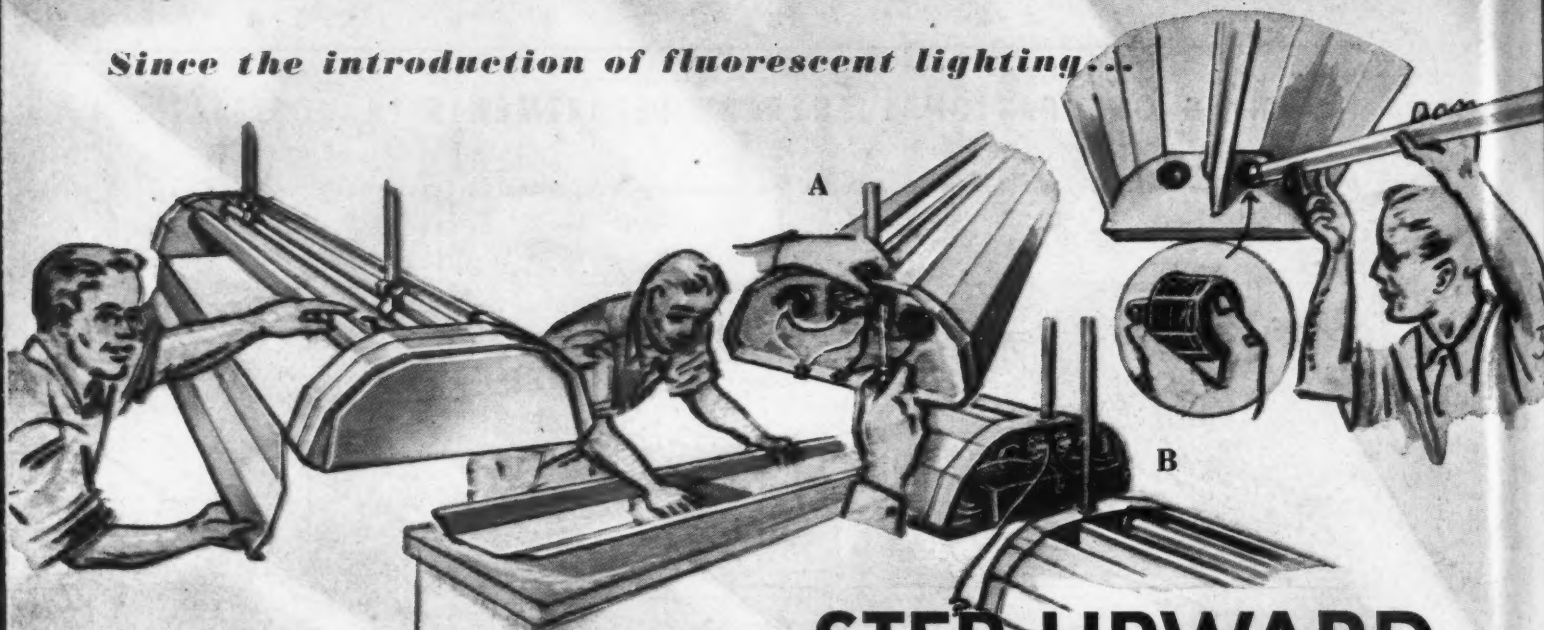
Space requirements for the various activities were determined from the following estimate:

Activity	% of Patients	No. of Patients
Wood, plastics, metal	22	7
General crafts (table activities).....	64	19
Ceramics.....	9	3
Printing.....	5	2
	100	31

**Variations for hospital types:** the larger plan is suitable for *general medical and surgical hospitals, psychiatric hospitals* and, with minor changes in equipment, for hospitals treating *physical disabilities*. Several units might be used for very large psychiatric hospitals. *Pediatric hospitals* are seldom as large as 500 beds; if so more personnel are needed.

*Tuberculosis hospitals* require a number of variations as shown on the separate plan on Sheet 3. Separate recreational rooms and sterilization equipment might be needed.

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in industrial SEEING COMFORT  
...new **BENJAMIN "Task Master"**

*Shatters precedent with a completely new concept of lighting unit design!*

*Masters the brightness ratio problem by directing approx.  $\frac{1}{4}$  of light upward!*

*Doubles...even triples...present standards for industrial seeing comfort!*

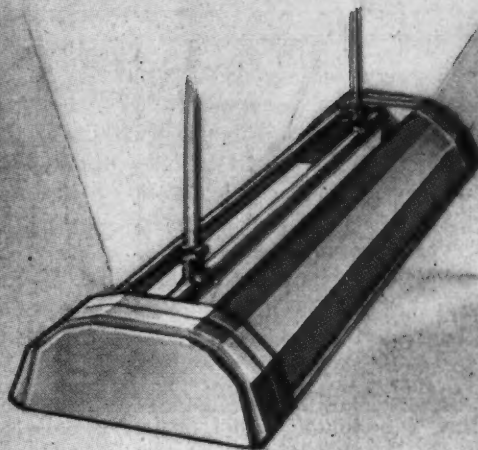
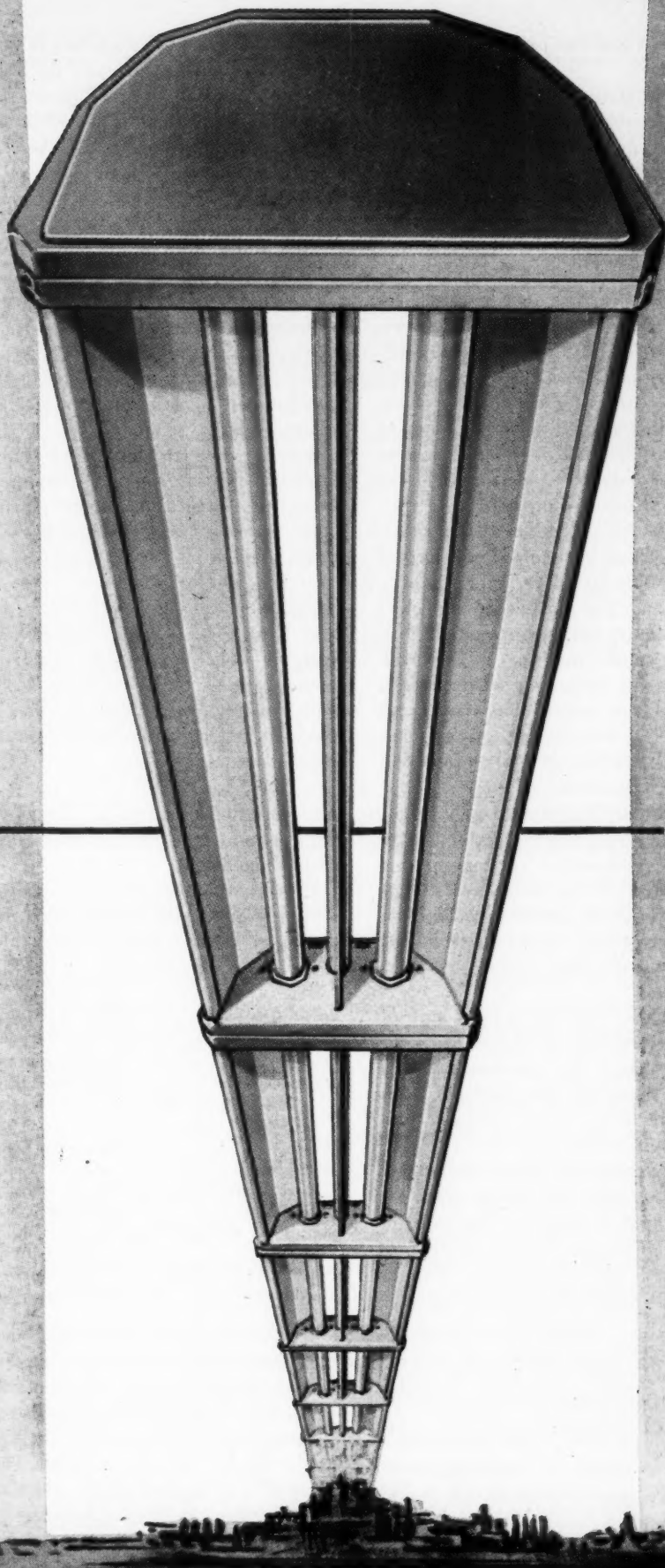
*Introduces new methods of installation and maintenance!*

Yes, the new Benjamin "Task Master" is the greatest step UPWARD in industrial fluorescent lighting history. It's a step UPWARD to high lighting levels without the discomfort which can often accompany them...a step UPWARD to complete freedom from annoying ceiling contrast that may cause excessive brightness ratios. It's a step UPWARD to greater seeing comfort in Amer-

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3 ways to mount: chain, conduit and sliding hanger suspension (illustrated).\*

**UPWARD ILLUMINATION COMPONENT** directs approximately  $\frac{1}{4}$  of light towards the ceiling. In addition to providing more generous **UPWARD** flow of light, this unique construction reduces maintenance expense as it practically eliminates horizontal areas where dust and dirt can collect.

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**PRE-WIRED . . . NO WIRE SPLICING . . .** All Connections made to Terminal block. No need to run line wire through fixture. Furnished with branch circuit wiring already run through a combination spine support and lamp shield. (Shielding angle is  $35^\circ$ ) Just connect line wires to terminals (see picture A above). For continuous line installations, simply connect "jumper" wires to opposite terminal blocks (see picture B).

**BALLAST AND TERMINAL BLOCK** are strategically located in easily-accessible end sections . . . out of the way for more streamlined appearance.

Of course, **EXCLUSIVE BENJAMIN "SPRINGLOX" LAMPHOLDERS** are standard equipment. They are acknowledged as embodying the most advanced lampholder features. Such as: rugged, all-metal construction and unique, patented spring design for "quick-in, quick-out" lamp maintenance.



### Color

There is every reason to consider the blending of colors as perhaps equal in importance to the more measurable light qualities of intensity and brightness. The environment in which a child works must, first of all, be inviting and pleasant. The ability of a normal individual to receive and understand what he is looking at is probably as much a matter of psychology as performance of the eye mechanism.

Low-contrast, high reflectance schemes, with their concomitant pastel shades, leave much to be desired from a decorative point of view and may actually not serve well the physiological and psychological needs of children.

**Hue.** Hue has been thought to have important psychological implications in school environment, largely due to color associations. Generally, the cool colors (green, blue, turquoise, and lavender) are restful and relaxing. The warm colors (red, orange, and yellow) are stimulating and exciting. The latter hues are also called advancing, since they are the ones most sharply focused by the eye, while the blues, greens and violets are receding; however, a brilliant green may "advance" in front of a dull red. There is a question as to how much psychological value any particular hue may have, in spite of all that has been said on the subject. The important thing is to achieve variety in their saturation and contrast in their use.

Still, the selection of hues for various school situations requires some consideration of the reactions and associations generally attributed to colors. Stimulating colors may be considered most useful in playrooms, lunchrooms, corridors, and entrances. When these hues are used in classrooms, they should probably be related carefully to the size of the area to

be covered and the particular result to be achieved.

The elementary classroom is becoming, more and more, a large laboratory with space provisions for a variety of activities. Color planning can do much to tie the laboratory functions together and yet allow the child to distinguish between the work areas.

The reading area calls for quiet hues, of a non-distracting quality. Areas for reading, music, art, and construction activities should utilize color for ready identification. The science space may possess qualities for the display of exhibits, small animals, fish and plants, to best advantage. The motion picture area should be designed to increase light absorption as much as possible.

There is little question that good illumination can be secured regardless of the hues. This, therefore, emphasizes the great latitude possible in choosing colors for elementary classrooms and the tremendous variety that may be employed to create an interesting environment. Children love color—big, bold, and bright. Soft, delicate, or grayish hues lack the cheerfulness and stimulation that appeal to them.

Corridors and stairways may be bright yellow, especially if poorly lighted naturally. A combination of dark purple stairwell and light treads makes the steps easy to see. Offices in soft green or blue-green are quite practical. And, of course, cool colors are desired on the sunny side.

**Value.** Value denotes the amount of light reflected from a color and is similar, therefore, to the term brightness as referred to lights. For example, blue may have many values ranging from light blue to dark blue.

The current tendency appears to be to weaken the colors by making them extremely light in value for the sake of greater reflectance. The desirability of

this trend is very questionable. It would seem more practical to vary the values from wall to wall, or area to area, if for no other reason than to provide a comfortable environment for each task.

**Chroma.** The strength of a color is known as chroma. It is a quality of brilliance. Some light blues, for example are more intense or brilliant than others. Also, within the spectrum, some hues are stronger in chroma than others. Red is the most intense color. Blue-green is a weaker color. A grayish blue-green would be extremely weak in comparison with a saturated red.

Intense colors require great skill in their use over large areas if they are to be universally pleasing. Accent given to small areas by the strong colors is frequently helpful if done in good taste.

**Mass.** What has been said about intense and weak colors would indicate that mass or area covered is an important consideration in color planning. Colors with high chroma should probably be confined to smaller areas in contrast with less intense colors.

**Artificial Light and Color.** Colors will vary in appearance with different types of artificial lights.

Here is what happens to a maroon under several artificial lighting conditions and different kinds of daylight:

Type of Light	Cast of Maroon
Natural daylight	True maroon
Skylight alone	Bluish-violet cast
Sunlight alone	Brownish-orange
Incandescent	Light and bright
Fluorescent	
White	Brown cast, dull
Warmtone	Dark
Deluxe Warmtone	Bright, rich
Soft White	Red cast
Deluxe Cool White	Clear, vivid, slightly darker
Standard Cool White	Darkened, grayed
Daylight	Violet cast, dark

In picking colors, it is important to view them under conditions of daylight with the proper exposure as well as under the artificial light which will be used.

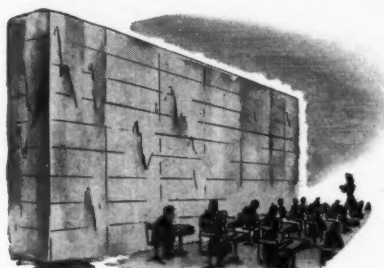
Principally, schools need color, light, and a cheerful, open environment. There appears to be no formula by which this can be achieved. In fact, formulas and "perfection" may defeat the principal purpose by creating sterility of environment. Fundamentally, we desire an environment conducive to interest, stimulation, and growth of children. This is no mechanical task, but rather one of the greatest complexity.



A cheerful, open environment is needed in elementary schools, conducive to interest, stimulation and growth of children



The free-standing Nesbitt Syncretizer Unit Ventilator with Wind-o-line Radiation extending from both ends of it, at the sill line.



## To solve your "WALL-OF-ICE" problem... this NESBITT THERMAL BLANKET:

Architects who design and school officials who approve large window areas in the modern classroom may delight in their choice if *thermal comfort* has been considered.

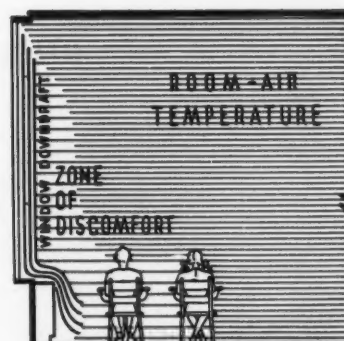
Unit ventilators could be selected by conventional standards if thermal comfort depended alone upon the classroom air temperature. But today we know that low-temperature exposures and cold window downdrafts may remain the robbers of pupil comfort, even in classrooms with close control of room-air temperature. The practical solution to the chilling effect of window downdraft is to release heat upward over the exposure.

For conditions of large glass area and cold outdoor temperature, Nesbitt provides Wind-o-line Radiation for integration with the Syncretizer.

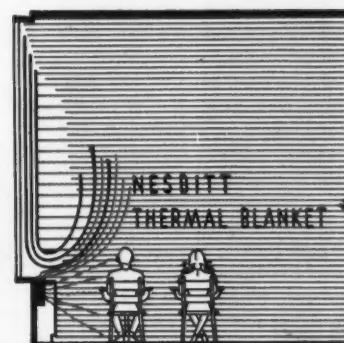
Wind-o-line consists of fin-and-tube radiation in a grilled wall-hung casing to extend from both ends of the ventilating unit for the full window length—and continued, if required, along cold outside walls. (Or it may be had as a component of the storage cabinets forming The Nesbitt Package.)

Wind-o-line solves the problem of heat loss logically with a heat gain where and when needed. Convected currents of warm air temper the window downdraft and divert its flow upward and above the heads of the room occupants.

Inquire further of John J. Nesbitt, Inc., Philadelphia 36, Pa.



With room-air temperature evenly maintained, downdraft from large cold windows may remain the robber of comfort.



Nesbitt Syncretizer and Wind-o-line temper the downdraft, raise it out of impression range, and improve thermal balance.

# NESBITT *Syncretizer* WITH WIND·O·LINE

Wind-o-line Radiation may be integrated as part of The Nesbitt Package of Syncretizer and storage cabinets—now available in both 28" and 32" heights.





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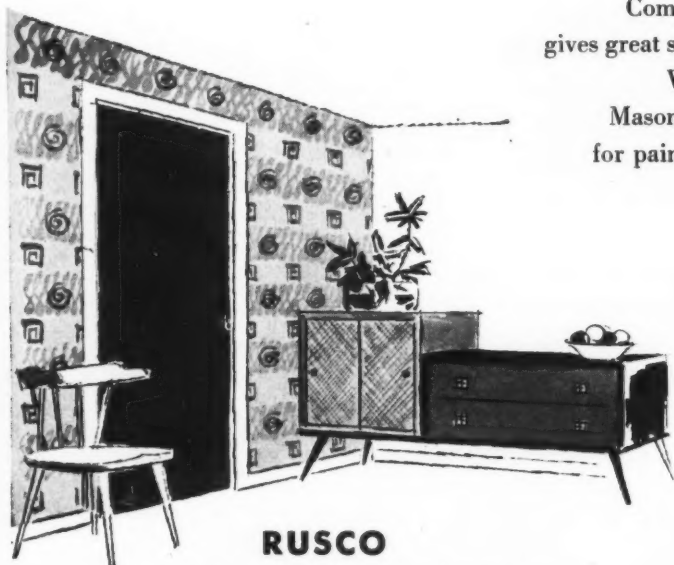
### **RUSCO Noiseless Sliding Wardrobe Door Unit** —simplifies closet placement, saves floor space

These modern, smooth-sliding, hollow-core doors are an ideal solution to space-saving and economical construction.

Compressed grid core construction gives great strength without excess weight.

Warp-free and sound-resistant.

Masonite Duolox surface is excellent for painted finish. F. H. A. approved.



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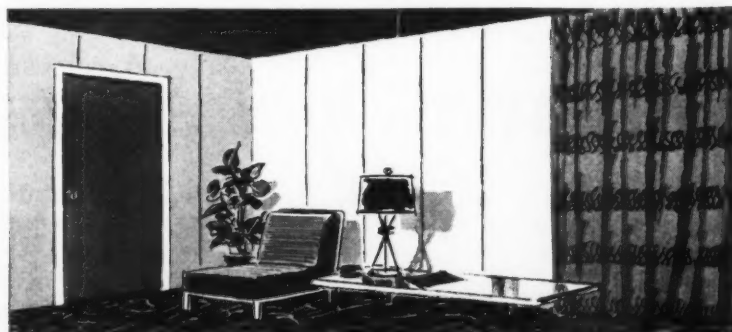
#### **Flush-Fitting Hollow Core Door**

Light in weight and warp-free, the Rusco flush-fitting hollow-core door is a sound, low-cost specification for both interior and exterior use. Modern, water-resistant and sound-resistant, it enhances the appearance of the home and room interiors. Masonite Duolox surface takes excellent paint finish. F. H. A. approved.

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## Revolutionary new **RUSCO** Hot-dipped Galvanized Steel Prime Window

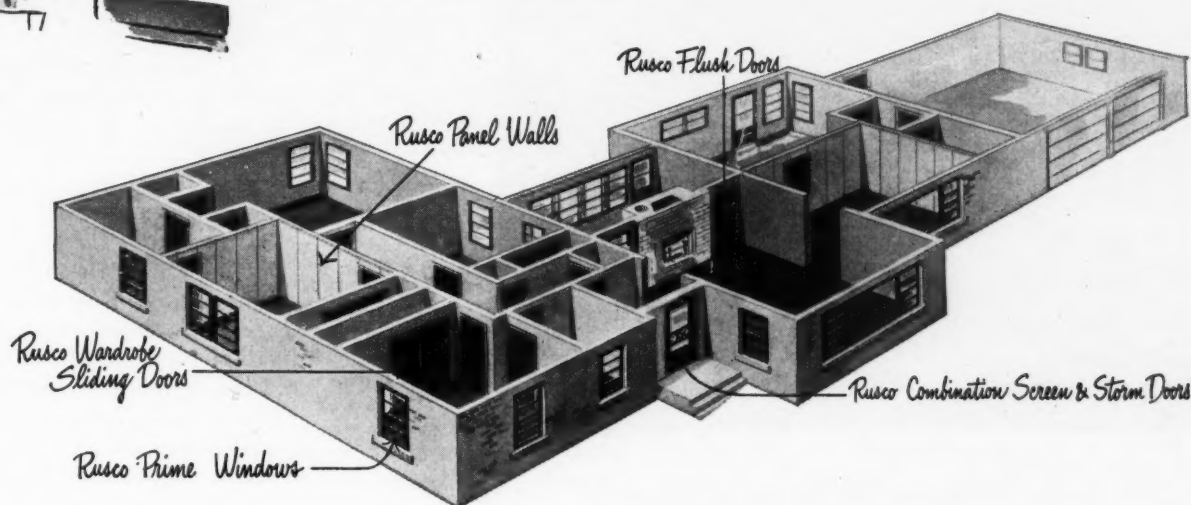
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RUSTPROOF LUMITE SCREEN  
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INSULATING SASH\*  
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**All in one unit!**

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Comes factory-painted, fully assembled—all ready to place in the stud openings. Makes *big* savings in installation time and labor.

Builders report complete installation of the Rusco Prime Window in *as little as 5 minutes* on many types of construction.



## **RUSCO** Combination Self-Storing Screen and Storm Door

It's a screen door and a storm door all in one! Self-storing glass and lower screen panel arrangement makes it unnecessary to *change* anything. Simply raise lower glass for ventilation—just as you'd raise a window. Or, it converts in seconds to all-screen or a beautiful all-glass picture window door! Strong, durable tubular-steel construction. Finished with baked-on outdoor aluminum enamel.



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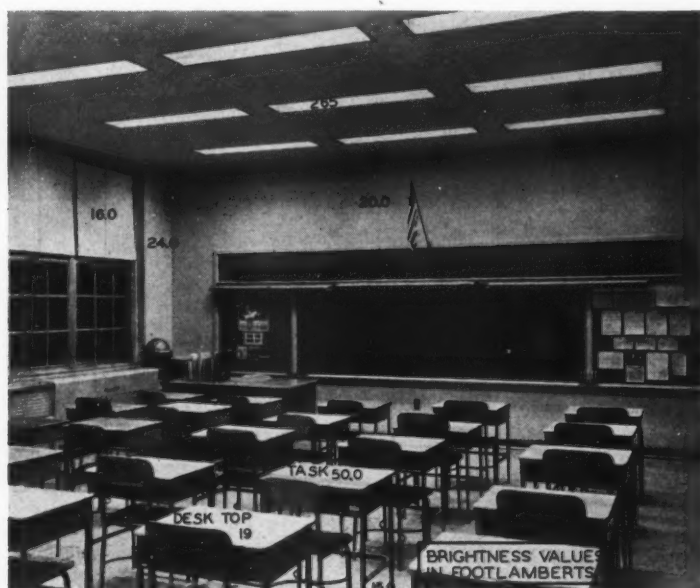
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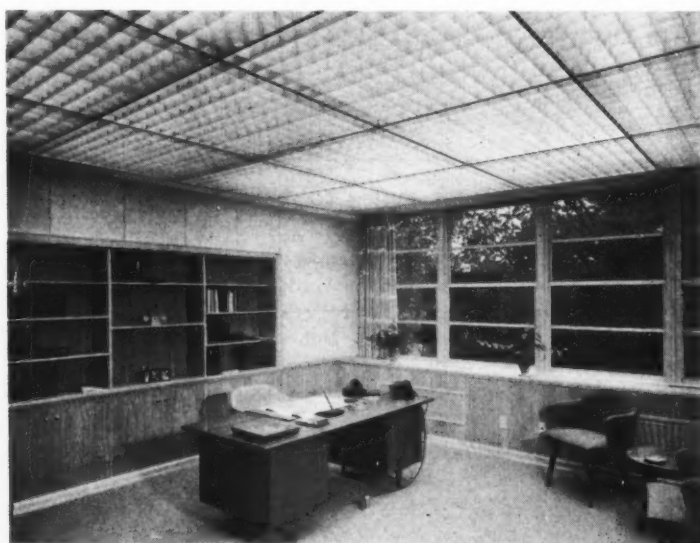
3

Above: school library has plenty of light, but the brightness ratio between fixtures and the ceiling is quite high. Below: photo of classroom shows results of a brightness study. Illumination is 60 ft-c



4

Below: the egg-crate louvered ceiling in this office shuts out direct view of fluorescent lamps, but does not prevent reflected glare at the desk surface



5

## ADVANCES IN ARTIFICIAL LIGHTING

(Continued from page 213)

in a plan showing ingenuity. The central system is indirect lighting supplied from a cove using line sources. It makes little difference whether cold or hot cathode lamps are used, the selection depending upon the economy in furnishing lumen-hours. The work areas are lighted by a louverall system, which delivers 95 foot-candles to a bookkeeping department. The customer area has a level of 35 foot-candles. The brightness ranges from 15 to 75 foot-lamberts, values which may safely be placed in the line of direct vision without discomfort.

Though school work areas have always been considered of primary importance, the promotion of artificial lighting in the last six years seems to be much more active. Consider Figs. 3 and 4, school library and classroom lighting.

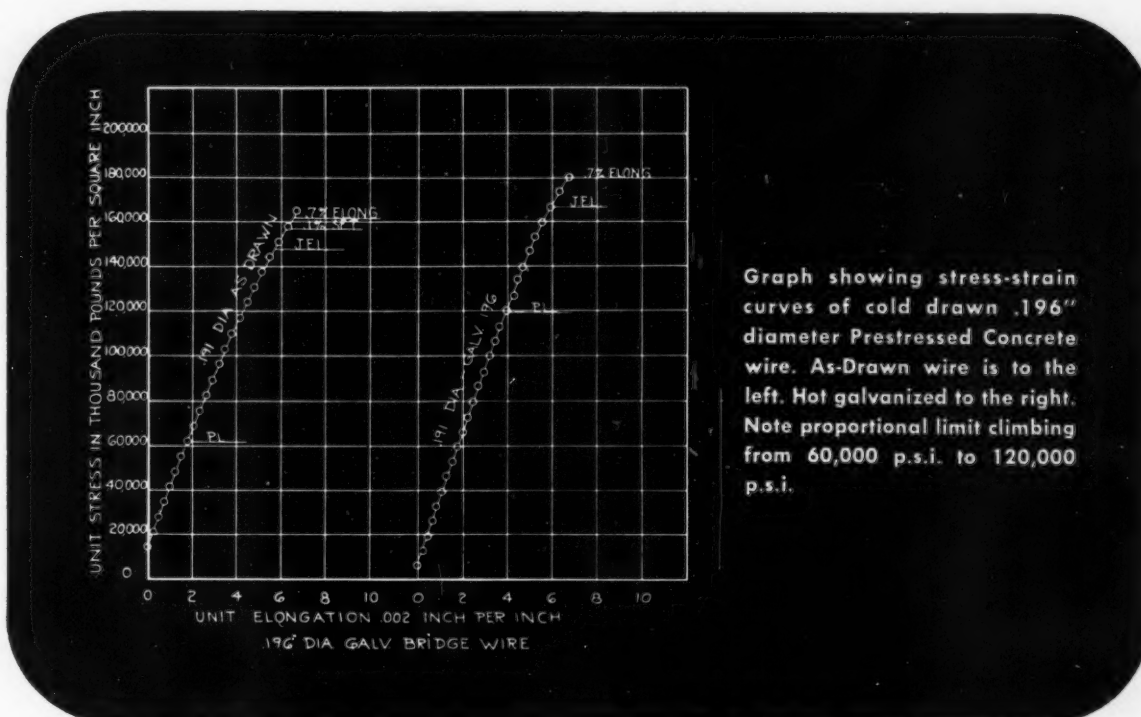
The library would be considered adequately lighted with an average of 95 foot-candles, and the quality would be acceptable with a maximum of 410 foot-lamberts on the ceiling units, but this acceptability becomes questionable when the brightness ratio between the lighting units and the ceiling is 410 to 15 foot-lamberts in this relatively long, low room. The requirement that the lighting system should give light but not focus the attention has been ignored in this system because the brightness contrast will draw attention to the lighting system when one enters the room. In the general range of vision, brightness is satisfactory from 23 to 35 foot-lamberts.

Fig. 4 shows a classroom lighted by low brightness lamps in equipment with a 25 degree cut-off (cross-wise). Numbers on the photo give brightness values. Unfortunately, brightness studies made before the lighting is installed present many difficulties, and can give only limited results at present. Experience with actual installations is the best guide. The brightness ratio of the fixture to the ceiling (which is 11) is acceptable and well within the recommended range. Use of a low brightness source reduces reflected brightness of the image on the task, giving a very acceptable lighting at 60 foot-candles, whereas the same installation with standard fluorescent lamps would probably require 80 to 100 foot-candles for equal protection from reflected glare.

Figs. 5 and 6 show two types of total ceiling lighting, the louverall ceiling and the luminous panel. The egg-crate type of louver exposes the work to the brightness of the source, while the translucent material reduces the reflected glare.

(Continued on page 238)

# PRESTRESSED CONCRETE



## Why you should use hot-dipped galvanizing

SURFACE PROTECTION is *not* the chief reason to specify hot-dipped galvanizing on your post-tensioned Prestressed Concrete projects. It's true that this method gives the best protective coating against corrosion. More important, however, hot-dip galvanizing of the acid steel relieves the wires and raises their elastic properties considerably above those of cold drawn wire.

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Strand for post-tensioning is just one of a full line of Roebling Prestressed Concrete products. Wire and strand for *pre-tensioning* are made of high tensile acid steel that results in exceptionally high elastic characteristics. They are specially treated to greatly increase their bonding quality, too.

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Roebling Prestressed Concrete Strand and its specially developed fitting which are available in a complete range of sizes from  $\frac{3}{8}$ " to 1-9/16". With an inexpensive hydraulic ram, assemblies such as these can be brought to stress in a matter of minutes.

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ANGELES, 5340 E. HARBOR ST • NEW YORK,  
19 RECTOR ST • ODESSA, TEXAS, 1920 E. 2ND ST  
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OFFICE, TRENTON 2, N. J.





# "74.2% MORE STEAM PER DOLLAR—

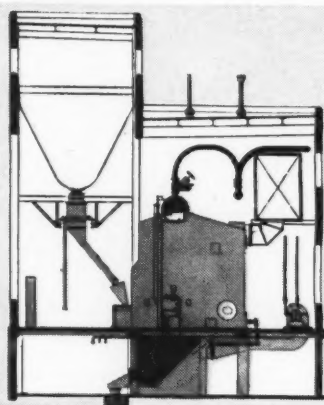
that's what this modern coal installation gives us at Perfection Stove Co.!"

says George I. Chittenden, consulting engineer for the Perfection Stove Company.

Perfection's old installation, if operating today, would generate 1,362 lbs. of steam per hour per dollar. The new plant produces 2,373 lbs. of steam per hour per dollar. Here's proof of the economy and efficiency of bituminous coal burned with modern equipment.



This view of Perfection Stove's new steam plant shows the coal elevator and ash silo. Coal is delivered through an under-track hopper, lifted by elevator to storage. A pneumatic system carries ashes to the silo.



This sectional drawing of the plant's boiler installation shows the coal bunker over the firing aisle. A weigh larry with dust-proof connection feeds coal to the stokers. The plant is clean and efficient—typical of the modern design that makes full use of coal's inherent advantages.

● More and more consulting engineers are advising their clients that *bituminous* coal is the best buy for steam fuel. *Here's why:* Nearly everywhere coal yields more BTU's per dollar . . . modern combustion installations step up this inherent economy . . . up-to-date coal- and ash-handling systems cut labor costs to a minimum.

Tremendous reserves give coal a future dependability of supply no other fuel can offer. And to mine this coal, America has the world's most productive and efficient coal industry—making coal the one fuel most likely to remain reasonably stable in price.

If you're building or planning to modernize a steam plant, call in a competent consulting engineer. He'll show you how a modern coal installation can save you money and do a more efficient job, too!

If you operate your own steam plant, you can't afford to ignore these few down-to-earth facts!

**COAL** in most places is today's lowest-cost fuel.

**COAL** resources in America are adequate for all needs—for hundreds of years to come.

**COAL** production in the U.S.A. is highly mechanized and by far the most efficient in the world.

**COAL** prices will therefore remain the most stable of all fuels.

**COAL** is the safest fuel to store and use.

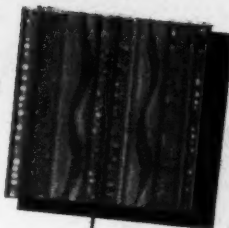
**COAL** is the fuel that industry counts on more and more—for with modern combustion and handling equipment, the inherent advantages of well-prepared coal net even bigger savings.

**BITUMINOUS COAL INSTITUTE**

A Department of National Coal Association  
WASHINGTON, D. C.

FOR HIGH EFFICIENCY  FOR LOW COST  
**YOU CAN COUNT ON COAL!**

EGYPTIAN COLUMN  
In 6" x 6" or  
6" x 9" tiles

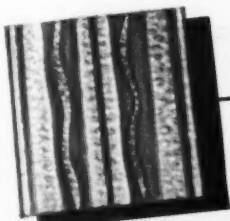


*Ceratile*

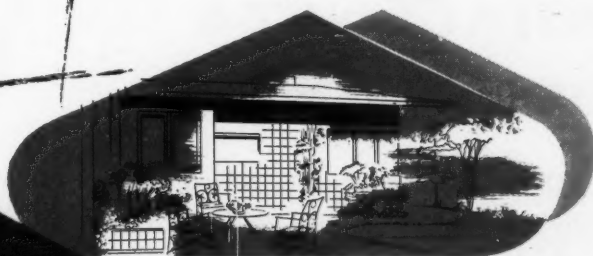
You can really "let yourself go" with Ceratile.

Beauty is just the beginning! The richness of new tints, tones, shades and hues—the new, soft fabric-like texture of the surface—the originality of the 34 new patterns—all make Ceratile a new experience for kitchens, baths, patios, foyers and numerous other areas of the home.

As for utility, Ceratile is a natural. It's real clay tile—the material that has no peer in day-in, day-out service to homes.



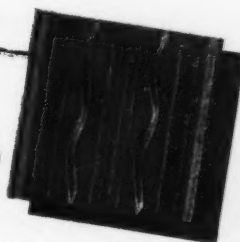
GRECIAN COLUMN  
In 6" x 6" or  
6" x 9" tiles



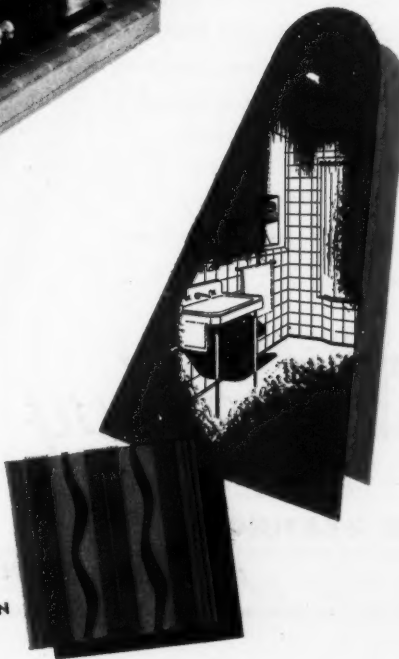
It's wonderful  
what you can do  
with

*Ceratile*

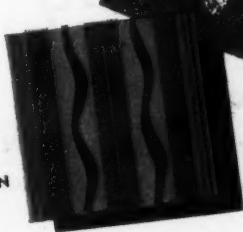
ROMAN COLUMN  
In 6" x 6" or  
6" x 9" tiles



Fine photography and engraving only approximate the color and texture of Ceratile. Until you can see the real thing, write, on your letterhead, for a full-color brochure showing 34 new patterns ready for delivery now—and for the name of the Ceratile dealer nearest you. Custom patterns, to your order, available as custom production schedules permit. Ceratile can be frostproofed for exterior use. Please direct inquiries to desk, AR-5.



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"You save a lot more  
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broom-closet furnace"

**says Hess Swallow,**

**Bryant, Detroit Branch Manager**

"Out of sight, out of mind" is by far the *safest* approach to concealed heating. Such equipment has to be *right*—or it's all wrong, and few can afford to have that happen. Making things *right* is an old Bryant custom, and it certainly has paid off in the way you've accepted our *Vertical Forced-Air Furnace*. It has paid off for *you*, too, in the way this compact, highly efficient gas furnace has performed—in thousands of single dwellings, more thousands of multiple-housing units, over the country. Completely automatic and occupying as little as two square feet of floor space in the smaller sizes, the Bryant Vertical Gas Furnace can help you cut construction costs while providing more living space for homemakers. Your Bryant Distributor will be glad to give you all the details and help you fit the Bryant Vertical into your plans. Or you may write Bryant Heater Division, Dept. 214, Affiliated Gas Equipment, Inc., 17825 St. Clair Avenue, Cleveland 10, Ohio.



**Bryant Model 304  
Winter Air Conditioner**

Gas-fired, forced-air furnace. Six sizes, with inputs from 45,000 to 145,000 Btu per hour. Approved by A. G.A. for all gases. Features *Hevigage* Heat Exchanger and *Push-Button* Ignition (city gases only).

**bryant** *best buy*

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AUTHORITATIVE  
BOOKLETS—FREE!**

**F**or years the National Bureau of Standards has made intensive and constructive studies of the causes and prevention of leakage in masonry walls. The results are contained in the valuable booklets illustrated at the left, one published by the National Bureau of Standards and the other by the Structural Clay Products Institute.

Both these books are "musts" for anyone interested in watertight masonry construction. In a few fact-filled, well-illustrated pages they discuss every important factor in preventing leaky masonry walls. Here are a few of the chapter heads: "Effect of Suction Rate of Brick", "Effect of Kind of Mortar", "Effect of Design of Walls", "Effect of Workmanship", "Effect of Water Retentivity of Mortar".

As manufacturers of Brixment, the world's largest-selling masonry cement, we are just as interested in watertight masonry construction as you are. Hence our offer to send you both books, without cost or obligation. The coupon is for your convenience.

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Gentlemen: Without cost or obligation, please mail me a copy of "Watertightness and Transverse Strength of Masonry Walls" and "Report BMS82 on the Water Permeability of Walls Built of Masonry Units".

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**LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE, KENTUCKY**



Above: office, similar to Fig. 5, has luminous ceiling of plastic which reduces glare, but there are objections to its flat look as compared with shadows of the louverall ceiling. Below: cove furnishes indirect light on the walls of this store, while downlights in windows and silver-bowl lamps in the sales area accent merchandise



Below: this installation demonstrates how lighting can improve the appearance of a shop as well as seeing conditions. Louvered fixtures direct light up to brighten ceiling and direct light down on work



## ADVANCES IN ARTIFICIAL LIGHTING

(Continued from page 232)

6

In the first instance, the illumination is 35 foot-candles, and, in the latter, it is 48 foot-candles. To approach equal visual comfort, the foot-candle values should have been reversed. With bare lamps exposed to the work, at least 50 per cent more illumination is necessary to eliminate reflected glare discomfort.

Either type of lighting is expensive in initial cost and maintenance. A maintenance cost of \$25 is the conservative estimate for one complete servicing of louvered or translucent lighting panels in an average classroom. The louverall ceiling has a somewhat better maintenance factor. Some objections have been raised to the luminous ceiling because of the dull, flat appearance compared to the presence of shadows in the louverall ceiling. The appearance of the luminous ceiling is improved when acoustical strips are used.

Contrasted with task lighting in the school and office is the sales lighting for the store (Fig. 7). In the selling area, economics and visual comfort might be considered secondary to sales promotion. The merchandise must look appealing and be easy to view.

The store is lighted by a combination of indirect and direct sources, and is arranged to be a show window as well as a selling area. General lighting is from a cove furnishing indirect light. Downlights and silver-bowl lamps in reflectors are used to accent material in special sales areas. The average store lighting entry in the competition used the conventional package type of luminaire. These luminaries provide acceptable store lighting with the accent lighting added where necessary, but the result is rather prosaic. Too many of the installations are planned by specialists in illumination without the benefit of architectural background. The result is that the lighting may be adequate, but lacking in esthetic appeal.

Industrial work areas have been lighted, in the past, by systems of very inferior quality. Attempts have been made to correct uncomfortable glare and brightness conditions by increasing the number of foot-candles. Industrial lighting frequently has consisted of only slightly shielded sources, subjecting the worker to direct glare. Many times this reflected glare was accepted as normal.

In most industries, the visual task does not differ greatly from the routine tasks in offices, where the use of average industrial lighting would hardly be considered.

(Continued on page 242)

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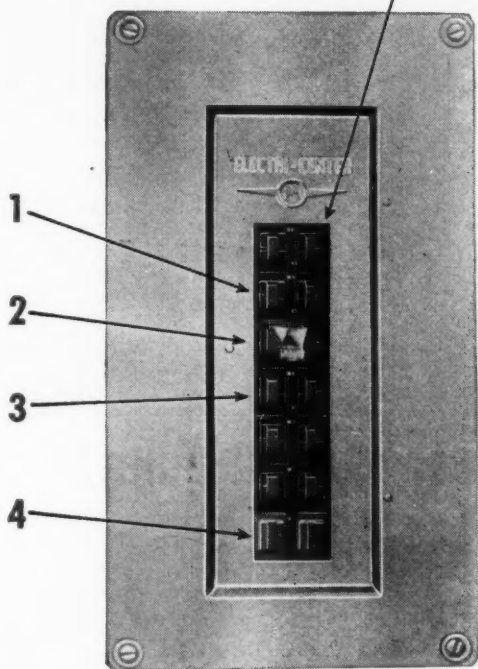
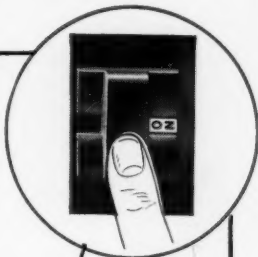


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## PUSHMATIC PROTECTION AND CONVENIENCE

Here's safe, modern circuit protection unmatched anywhere. Individual interchangeable Pushmatic breakers rupture circuits instantly when short or overload occurs.

Need no resetting. Just a simple PUSH restores circuit (except when short still exists). Foolproof. Trip-free. Listed by Underwriters'.



- 1 MAIN DISCONNECTS**—For service items. Provide individual control over 1- or 2-pole attic fans, ranges, heaters, dryers, etc. Space for 2 or 4 items. (Code permits 6 subdivisions of main service, Art. 230).
- 2 TIE HANDLE**—Two 50-amp Pushmatics tied together act as a Main Disconnect for all branch lighting circuits in lower section. (Each circuit is protected against overload and shorts by its individual Pushmatic breakers, however.)
- 3 LIGHTING CIRCUITS**—Space for 8 to 10 circuits, depending on XD Electri-Center model. All are pushed off or on by Main Disconnect, directly above.
- 4 UNUSED CIRCUITS**—Can be plugged with filler plates until needed.

**XD ELECTRI-CENTERS**—Space for either 12 or 18 circuits. Basic device consists of interior, box, front (flush or surface), 4 Pushmatics and 4 filler plates. 100-amp mains. Additional Pushmatics available in 15, 20, 30, 40 or 50 amps. Only 2 basic devices to stock and sell. Get all the details. Write for bulletin.



# BULLDOG

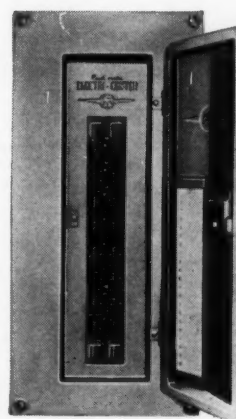
New BullDog XD Electri-Centers make it easy to plan flexible, centralized circuit protection for both lights and service appliances.

Here's the new BullDog XD Pushmatic Electri-Center®, a specially designed panel that provides one central control for *all circuits in the home, present and future!* . . . eliminates the need for individual fuse box and costly main switch by providing for both in a single panel.

Internal split-bus-bar design separates panel into two groups of circuits. Pushmatics in the upper section provide protection and disconnect for 1- or 2-pole service appliance circuits. One Main Disconnect gives master control over all individually protected lighting circuits in the lower section (see 4 points, left).

Of course, famous BullDog Pushmatic circuit breakers make the XD Electri-Center tops in safety, convenience and flexibility, too. To add a circuit, add a Pushmatic. *Safe, trip-free, positive automatic protection always.*

Check the features at left. Specify these great Electri-Centers for domestic installations. For complete details write for free bulletin.



## Also PB ELECTRI-CENTERS for homes, businesses

Same as XD Electri-Centers, except that bus bars are not split. Each circuit is controlled individually. Attractive, compact, simple. The last word in efficiency and flexibility. Available in 14 or 20 circuits, single-phase, 3-wire solid neutral or 3-phase, 4-wire solid neutral. Doors available if desired. Flush or surface fronts.

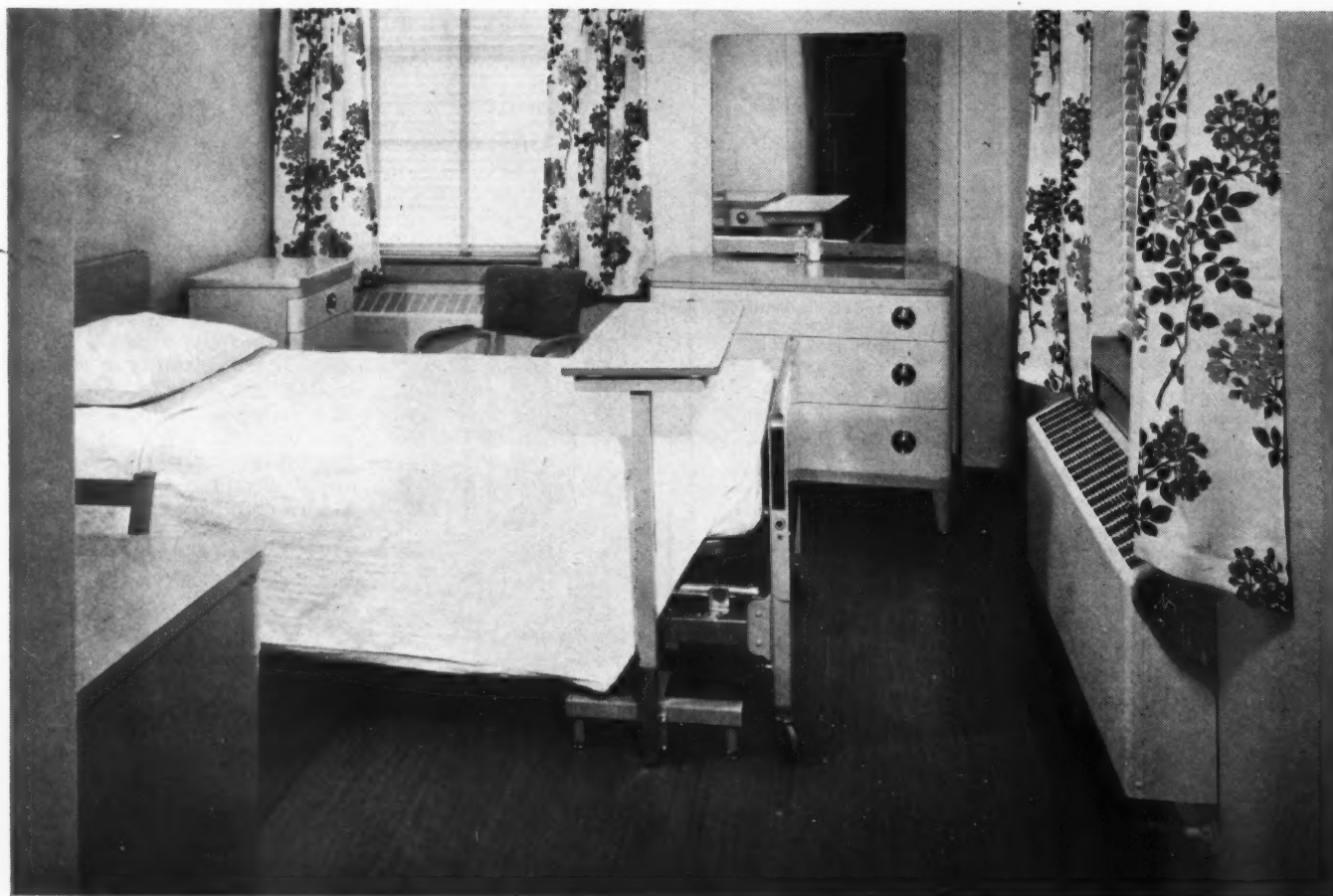
**BULLDOG ELECTRIC PRODUCTS COMPANY**  
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1902-1952 . . . SERVING INDUSTRY FOR 50 YEARS WITH FINER ELECTRICAL PRODUCTS





**These floors will STAY beautiful, bright, and quiet!**



*This smart, gleaming installation in the new Windham Community Memorial Hospital, Willimantic, Connecticut, will always be easy to walk on, easy to keep clean.*



They're famous  
**GOLD SEAL**  
**NAIRN**  
**LINOLEUM**  
 ...satisfaction  
 guaranteed!

When floors *have* to take a daily beating and still come up smiling... year after year after year... then there's only one floor covering that *really* fills the bill. And that's Gold Seal Nairn Linoleum... backed by the strongest money-back guarantee in the business!

Gold Seal Nairn Linoleum gives you everything you could possibly ask for in a floor: *long life... enduring beauty... easy maintenance... true resilience*. All backed by the good-as-gold Gold Seal guarantee of *satisfaction or your money back!*

*The Gold Seal is your money-back guarantee of satisfaction from the makers of the finest floor coverings in the world:*

**GOLD SEAL NAIRN LINOLEUM**  
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**GOLD SEAL VINYL INLAIDS**

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9

Standard fixtures in an art gallery provide a custom job. Split by baffles, the luminaires can shine light through one glass side onto the paintings, or through the other side which has lower transmission (to reduce direct glare) into the center

## ADVANCES IN ARTIFICIAL LIGHTING

(Continued from page 238)

Fig. 8 demonstrates that lighting in industrial areas is being remedied and that there is a trend toward eliminating the dual standards of commercial and industrial lighting. Some of the light is directed to the ceiling to light the luminaire background, while louvers diffuse the direct light. The illumination is 80 foot-candles, which is desirable with exposed fluorescent lamps to minimize reflected glare. This installation would be acceptable for general office work.

Designs for street lighting and outdoor recreational lighting seldom involve the architect, but the lighting of the art gallery (Figs. 9, 10) and the bus terminal (Figs. 11, 12) are definitely his work.

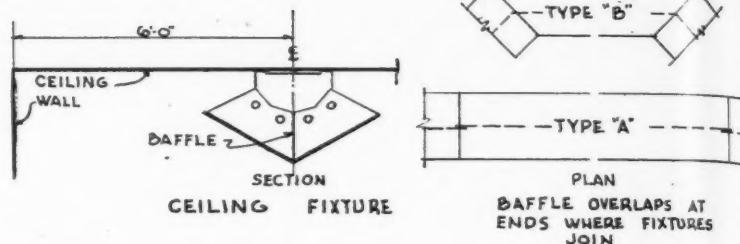
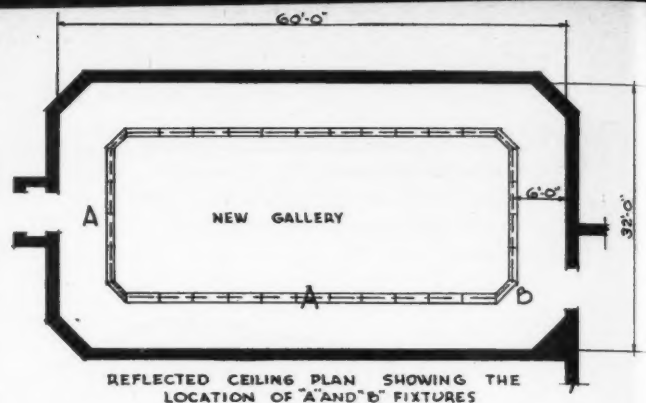
The art gallery is lighted by special equipment in which standard luminaires

have been converted by adding a baffle in the center separating the two sides of the luminaire. Light is thrown into the center cove and also upon the walls; however, the observer does not see the lighting equipment at normal viewing distance. The glass side of the luminaire facing the wall has high transmission for direct lighting of the displayed pictures, while the other side has a lower transmission to reduce direct glare from the equipment. The lighting of an art object always falls into a class of special designs, and seldom should be attempted with standard luminaires, such as used for school and office lighting.

Fig. 14 shows parking lighting on a bus terminal roof, which will accommodate 450 cars. This illustrates one of the

miscellaneous lighting tasks associated with special designs. Frequently, these lighting systems are not for critical seeing, and there is more leeway in design without the normal emphasis on quality.

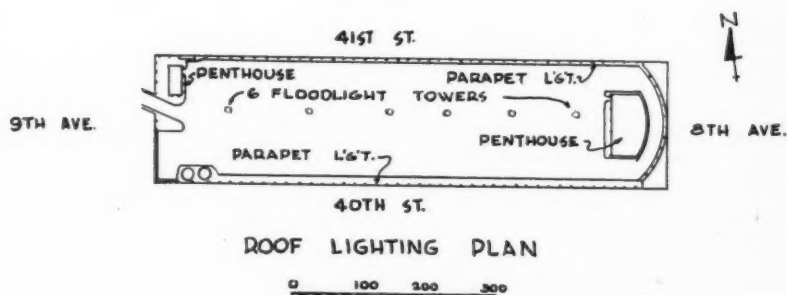
The marked trends in the 1952 Merit Award Competition point toward an industrial lighting of the future which will compare with that used for more severe lighting tasks. More attention is being given to the lighting of surroundings. The study of brightness ratios is taking its place along with foot-candle specifications. Lighter colored floor and office equipment is becoming a part of the lighting specifications. The trend toward brightness specifications will soon relegate foot-candle specifications to a secondary position.



10



11



12

Roof of the Port of New York Authority Bus Terminal which will park 450 cars gets light from floodlight towers and from a series of lamps along the parapet





Firestone Tire & Rubber Co., Akron, Ohio

FOR HANDSOME, SANITARY,  
PERMANENT WASHROOMS,  
DESIGN WITH

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the quality

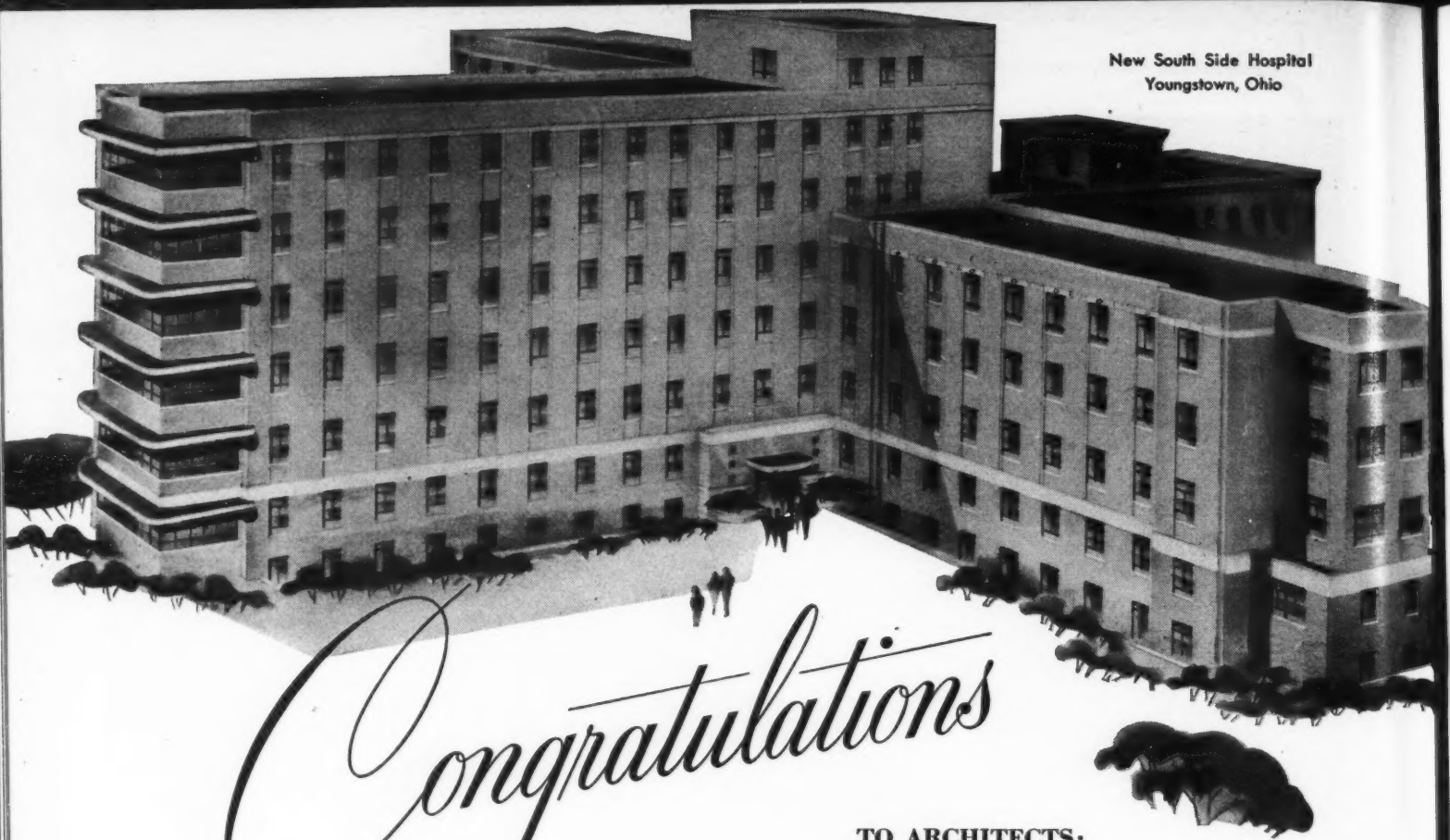
structural glass



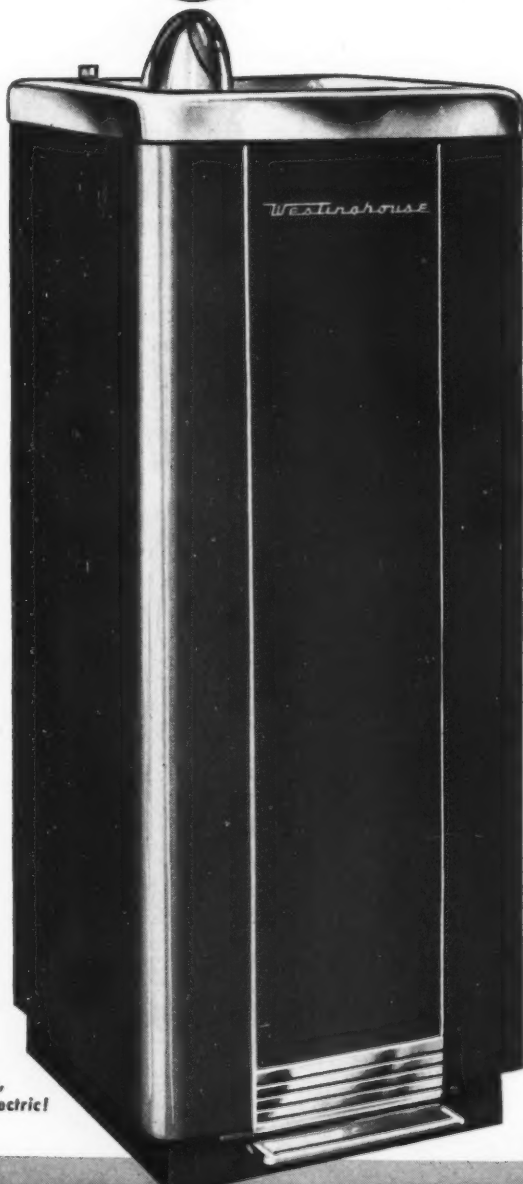
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New South Side Hospital  
Youngstown, Ohio



TO ARCHITECTS:  
*Kling and Frost*  
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This new Youngstown Hospital is superbly designed to meet all the requirements of modern medicine and surgery. Among its many practical comfort applications, you'll find Westinghouse Water Coolers (Model WA13A) on every floor, in every wing . . . all within easy access to patients, hospital personnel and visitors.

These Westinghouse Water Coolers efficiently meet all the engineering specifications for easy servicing and economical operation. They can be conveniently recessed; occupy only 14" x 14" of floor space. The baked-on, blue-grey enamel finish and stainless steel trim, blend with the restful interior decorative scheme.

WA13A . . . 13-gallon capacity. Stainless steel top. Foot-pedal control. Automatic stream-height regulator. Anti-squirt bubbler. 11 other models are available with capacities from 1 gallon to 22½ gallons.

Of course,  
it's electric!

WB3  
3-Gallon,  
Bottle Cooler



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**Westinghouse** Water Coolers are first choice in hospitals throughout the nation. They're known as the *Blue Chip Line of the Industry* . . . an endorsement established by the outstanding percentage of industry sales obtained in 1951 and continuing, this year, at an accelerated pace.

**first** for hospitals is not the only *first*. You'll find architects, consulting engineers and contractors everywhere specifying Westinghouse for every type of industrial plant; for military installations, institutions, stores or buildings, large or small.

**choice** of models is unlimited. The full line of Westinghouse Water Coolers includes Bottle, Pressure, Compartment and Remote Types; with capacities from 1 to 22½ gallons. All models carry the long-appreciated 5-Year Guarantee Plan. This covers the *entire* Hermetically-Sealed Refrigeration System: motor-compressor, evaporator and condenser . . . not just the motor-compressor alone.

**for** your immediate needs, Westinghouse has a complete Architect's Kit; a data file which includes large-sized, readable and accurate engineer's drawings. This file is yours for the asking. Drop a card to the Advertising Department, Westinghouse Electric Corporation, 653 Page Boulevard, Springfield 2, Massachusetts.

**Hospitals** which are now on your drawing board, or contemplated for the future, deserve Westinghouse consideration . . . a consideration which assures you every possible assistance in the selection of Water Coolers which will meet the most exacting details of local codes or construction requirements . . . for hospitals or for any project requiring a single unit or several hundred, because . . .

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Electric Appliance Division • Springfield 2, Mass.

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22½-Gallon,  
Water Cooled



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WAC2  
Compartment  
Pressure Cooler



WAP13A  
7-Gallon, Plain  
Top, Air Cooled



WWP22  
13-Gallon, Plain  
Top, Water Cooled

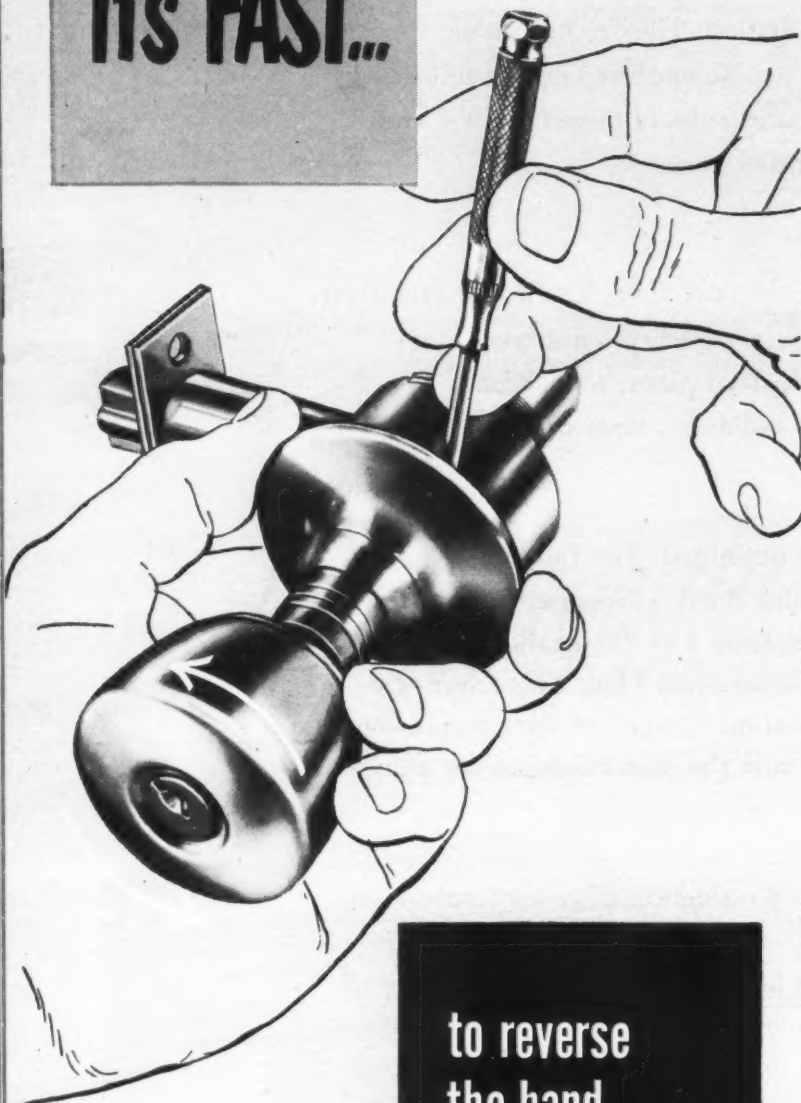


WBC1  
Compartment  
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**It's EASY...  
It's FAST...**



Engineered to  
Architects' Specifications

All Popular Functions

Knob Styles . . .  
in wrought or cast  
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*"Stilemaker"*

BY THE MAKERS OF THE ORIGINAL  
KEY-IN-THE-KNOB LOCK

to reverse  
the hand  
on the  
*"Stilemaker"*  
heavy-duty lock

In 4 simple operations, the cylinder of the new Russwin "Stilemaker" lock can be reversed for a different hand of door. It takes less than a minute. No serious installation delays if hand of door has been changed. When time is at a premium, this and other advantages of the "Stilemaker" lock count heavily in the architects' favor. Ask your Russwin Distributor for complete description of the advance-design "Stilemaker". Russell & Erwin Division, The American Hardware Corp., New Britain, Conn.

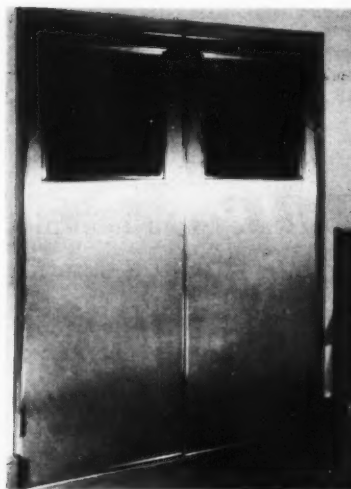
## Architectural Engineering

### PRODUCTS (Continued from page 215)

#### Doors and Door Frames

Two new doors for varied purposes and a new door frame are currently available:

- Stainless, *Rigidized Metal* doors were installed recently in a restaurant, and, according to the manufacturer, have resisted the hard wear encountered in such installations with great success. Strengthened with a three-dimensional design texture, the doors are said to stay neat and new-looking despite kicks and knocks, and to conceal scratches, dents, scuffs and fingerprints. Maintenance is reportedly confined to wiping away of



Rigidized metal door withstands hard wear, retains good appearance

surface dust with a damp cloth. Flexural rigidity of the metals is said to strengthen units upon which it is used, resulting in gage reductions and conservation of strategic materials. Rigidized Metals Corp., 685-P Ohio St., Buffalo 3, N. Y.

- A *Morrison Roly-Door* in a new 16 ft wide by 17 ft high size, like its 8 and 9 ft wide predecessors, is a steel, four-sectional overhead-type garage door, said to be permanently easy in its operation. This "free rolling" feature is reportedly insured by a system of counter-balancing springs designed for the unchanging weight of the all-steel doors. The panels are assembled in fixtures which the

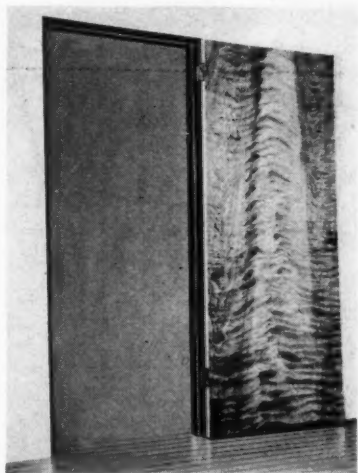
ARCHITECTURAL RECORD

## Architectural Engineering

### PRODUCTS

manufacturer describes as insuring identical attaching points and making for uniform rigidity from end to end. An exclusive simple hinging arrangement employing a rolling socket is reported to provide smooth, friction-free and noiseless, positive action. Each door has an infra-red-baked prime coat. Morrison Steel Products, Inc., Buffalo, N. Y.

A low-cost *Kewanee* steel door frame for residential use is now available for all 1 $\frac{3}{8}$  in. interior doors. The frame is said to offer substantial economy in both initial cost and costs of installation and reportedly can be installed in one-third



Steel door frame is nailed directly to sub-frame, complements flush doors

the time required for ordinary jamb and trim. No tabs or slots are used for assembly; instead, the frame is nailed to the sub-frame through holes provided every 7 in. along the flanges. The finished floor is laid under the bottoms of the jambs, eliminating cutting of the floor to fit the contour of the jambs. The frame also has a recessed edge for both plaster and dry-wall construction. The jamb edge reportedly provides plaster ground and no temporary plaster stops are required. The frame is said by the manufacturer to be a perfect complement to flush doors. Kewanee Mfg. Co., Kewanee, Ill.

(Continued on page 250)

## The New "Look" in the Los Angeles Area



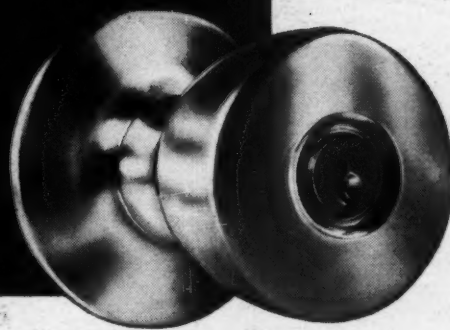
ST. FRANCIS HOSPITAL  
OF LYNWOOD  
Lynwood, California

SISTERS OF ST. FRANCIS  
Owners

HUGH R. DAVIES, Architect  
Long Beach, California

POZZO CONSTRUCTION CO.  
General Contractor

gets the  
new lock in  
builders'  
hardware



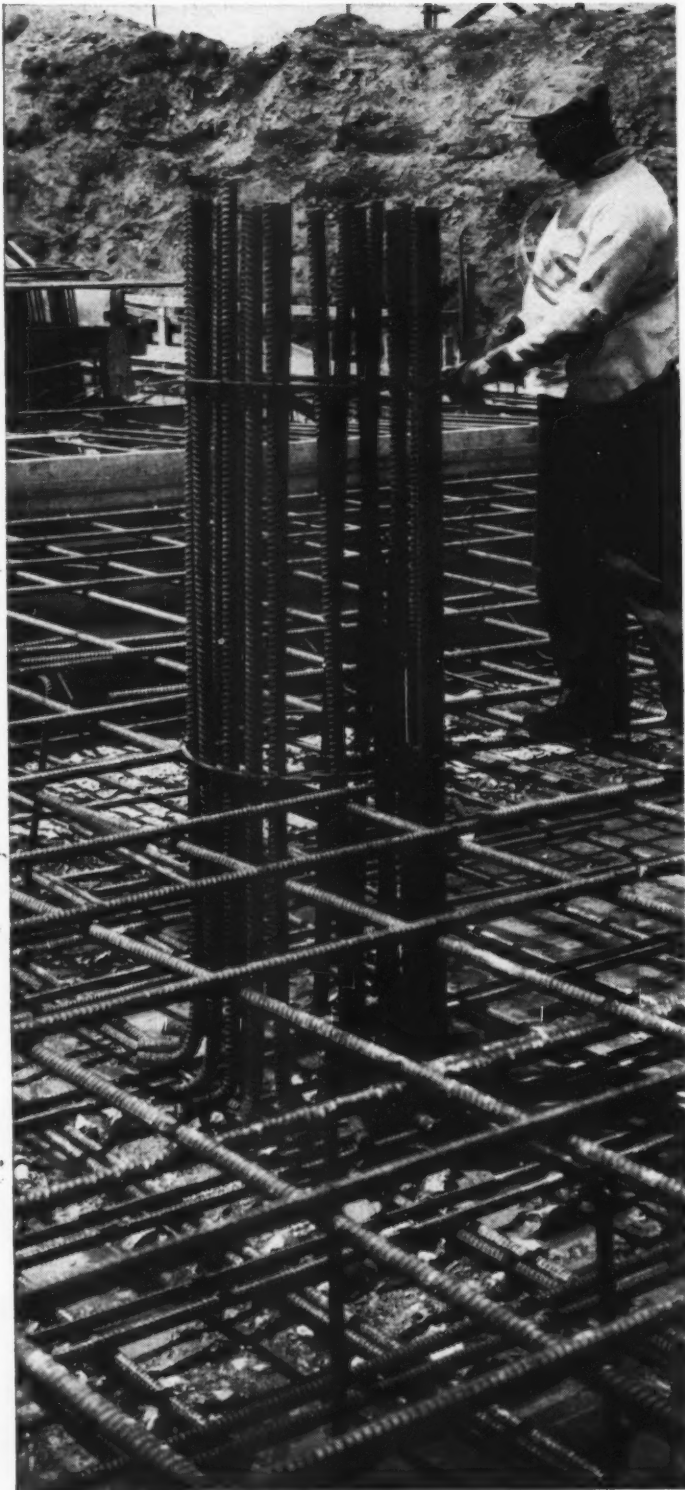
Russell & Erwin Division  
The American Hardware Corporation  
New Britain, Connecticut

**RUSSWIN**<sup>®</sup>  
"Stilemaker"

HEAVY-DUTY CYLINDRICAL LOCK



# CONSTRUCTIVE



## INLAND HI-BOND

The deep, reversed, double-helical ribs of Hi-Bond reinforcing bars provide a mechanical grip which gives maximum bond in concrete, thus permitting greater use of steel's potential strength in concrete construction. It also improves transfer of stresses, crack control and resistance to slip . . . advantages that will make possible higher design stresses and thereby lower construction costs. Hi-Bond meets standards set up by ASTM A 305.



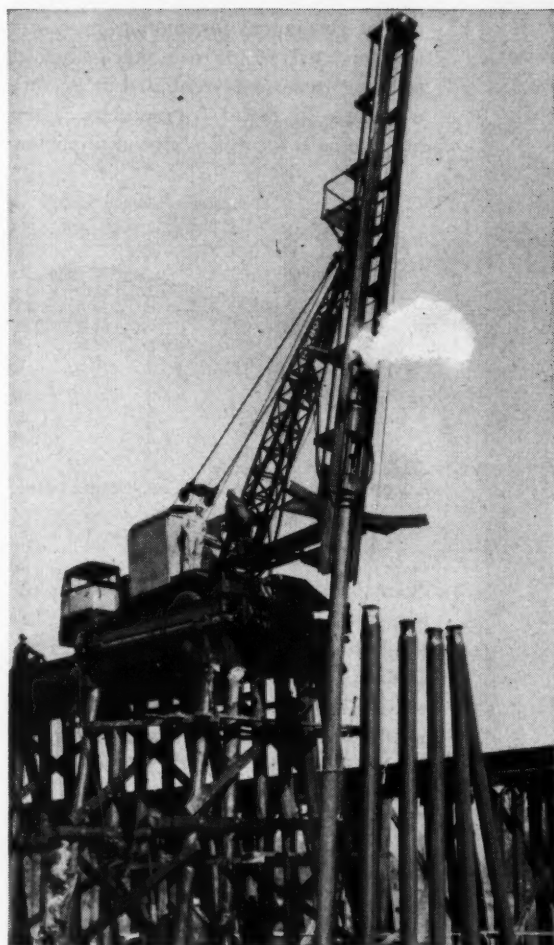
## INLAND STRUCTURAL SHAPES AND PLATES

Inland's service on structurals and plates meets the most exacting requirements of today's construction and heavy equipment industries . . . in dependability of product and engineering cooperation with users. I-Beams, Angles, Channels and other standard structural sections, in a wide range of sizes, are rolled to all the standard specifications . . . also in Inland Copper-Alloy for increased resistance to atmosphere corrosion.





# IDEAS

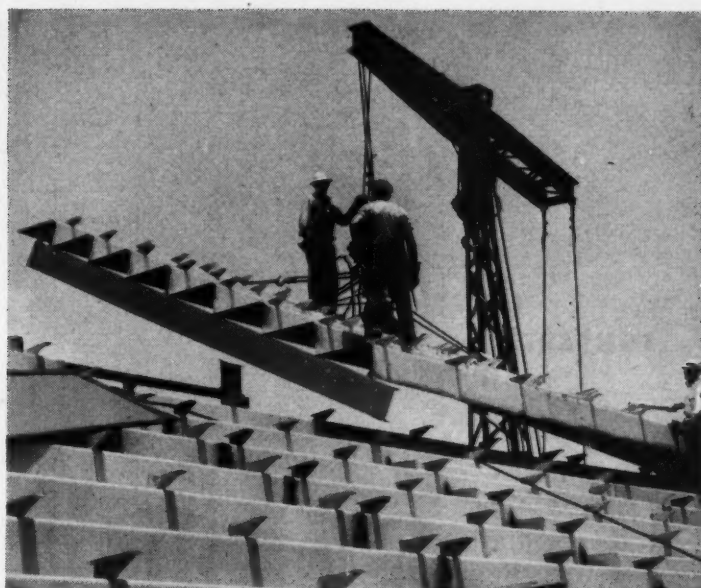


## INLAND CREOSOTE OIL

For better, longer-lasting preservation of timbers and wood piling. Inland-owned-and-operated coal mines, coke ovens and tar distillation equipment assure quality control at every step in production of Inland Creosote Oil. Its low benzol insoluble content of about 0.1% (American Wood Preservers Association specifications permit 0.5%) gives clean, deep-penetrating, longer lasting preservation.

### INLAND STEEL COMPANY

38 S. Dearborn Street, Chicago 3, Illinois



## INLAND 4-WAY SAFETY PLATE

On scores of products, on new bridges, in new buildings—and for replacement, maintenance and repair—this scientifically designed steel floor plate, with its exclusive raised lug pattern, provides positive traction in every direction. Tough, durable, strong, it stands up under heavy loads and hard wear. It can be readily sheared, welded, punched, flame cut, and shaped. It has no pores, no cracks, absorbs no liquids and is easy to sweep. Comes in a wide variety of patterns and sizes. Write for Bulletin FI.



## INLAND SHEET PILING

Taking the punishment of driving and pulling—being driven, pulled and re-driven as many as 15 times—Inland Sheet Piling has been used and depended on by piling contractors for more than 25 years. Made with highly efficient interlocks for water retention, it gives excellent service on single and double wall cofferdams, cellular breakwaters, jetties, docks, bulkheads and retaining walls. Rolled from a special analysis steel, with the strength, toughness and uniformity to withstand extreme and continued stresses. Available with all necessary sheet piling accessories. In Inland Copper-Alloy, at slight additional cost. And Inland sheet piling specialists with broad experience are available to help you on sheet piling problems. Write for Booklet SP2.



**FIAT**  
**TOILET COMPARTMENTS NOW AVAILABLE**

**DELIVERY**  
**PRICE**  
**QUALITY**

**MADE BY**  
**FIAT**  
**FIRST IN SHOWERS**

**QUALITY CONSTRUCTION**

**TOILET COMPARTMENTS** Made of stretcher leveled furniture steel . . . cold rolled or bonderized. Flush construction with laminated filler cemented in place under pressure. All compartments are sealed with a prime coat and finished with two coats of baked-on synthetic enamel. Hardware and connections supplied.

**DRESSING COMPARTMENTS**

**HOSPITAL CUBICLES**

See Sweet's <sup>22b</sup>/<sub>FI</sub> Architectural

**PROMPT SHIPMENT**

See your FIAT representative, or write to the FIAT plant nearest you. Consult us regarding your problems—we shall be glad to quote on Toilet Compartment or Dressing Compartment requirements.

**FIAT METAL MANUFACTURING COMPANY**  
**THREE COMPLETE PLANTS—ECONOMY • CONVENIENCE • SERVICE**

Long Island City 1,  
New York      Franklin Park, Ill.  
(Chicago Suburb)      Los Angeles 33,  
California

In Canada: FIAT COMPARTMENTS are made by  
Porcelain and Metal Products, Ltd., Orillia, Ontario

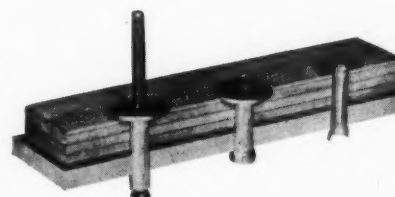
## Architectural Engineering

### PRODUCTS

(Continued from page 247)

#### Large Head Rivet

A low silhouette, large diameter head, blind rivet has been added to the *Huck* line of permanent fasteners. The rivets are reported to provide an increased bearing area for fastening thin or soft materials to metal frameworks. They may be used for foil, plywood linings or



*Large head rivet provides increased bearing area for fastening to metal*

floors, Masonite or Bristol Board panels, insulation, and other materials. Installation can be handled by one person and from a single side. The rivets are available in both aluminum and steel in either pull-through or self-plugging types in  $\frac{1}{8}$ ,  $\frac{3}{16}$  and  $\frac{1}{4}$  in. diameters. Huck Mfg. Co., 2480 Bellevue Ave., Detroit 7, Mich.

#### Delayed-Action Light Switch

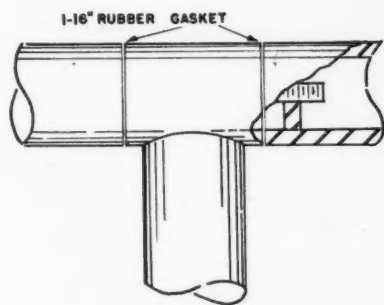
An *Edco* delayed-action electric light switch which keeps the light on for about a full minute after the switch is pressed is now being made available. Housed in a standard size case molded of Bakelite phenolic plastic, the switch reportedly can be installed quickly and easily in any existing wall outlet as well as in new construction. It is described as being particularly useful for porch lights or in bedrooms of children or aged persons. As in the case of conventional switches, the light is turned on immediately when the toggle is flipped up. When the new switch is flipped downward, however, a spring-loaded diaphragm postpones extinguishment of the light. The switch is of flush toggle, single pole design and has a capacity of 10 amp at 125 v. 5 amp at 250 v. Electric Deodorizer Corp., 9993 Broadstreet, Detroit 4, Mich.



## PRODUCTS

### Flush Type Hand Rails

Made from iron piping, new *Seaporcel* flush type hand rails have permanently fused-in porcelain enamel coating in any color and are streamlined in appearance. Fabricated to exact specifications of the architect's order, the rail is pre-fit with simplified connection for speed and ease of assembly. Costly on-the-job welding



Flush type hand rail is pre-fit, features concealed fastening

is eliminated with the product, which also features concealed fastening. It is described as rigid, vermin-proof and easy to maintain, since there are no crevices in which dust can accumulate. Seaporcel Metals, Inc., 28-20 Borden Ave., Long Island City, N. Y.

### Black Light Accessories

A line of fluorescent materials for use with long-wave ultra-violet or black light tubes and fixtures is now available from the manufacturer of *Blak-Ray* tubes. The materials are said to be especially adaptable for industrial applications requiring inspection markings that will be invisible in ordinary light, as well as for exhibits, displays, charts, identification applications, and protection against theft. The accessories include marking pens, stamp pads, wire, yarn, ribbon, crayons, invisible tracer pastes and powders, fabrics, papers, cardboards, assorted colored sands and water color and bulletin paints. Ultra-Violet Products, Inc., 145 Pasadena Ave., South Pasadena, Calif.

(Continued on page 256)



## You'd Specify and Install *Cascade* BATH ENCLOSURE

Every home planned for a tub shower needs this beautiful, colorful bathroom improvement. Every housewife will welcome the *Cascade* because it eliminates the old fashioned, floppy wet curtain and *really* keeps water off the floor.

The *Cascade* is made of lustrous, jewel-like Plexiglas, successor to glass where appearance and safety are paramount...artistically fluted by FIAT to add sparkling splendor to any bathroom. The two rigid panels (each 34"x60") glide smoothly in the aluminum track at the touch of a fingertip from either end. Comes in Clear Crystal, Pink and Gold; fits any 5-foot recessed tub.

The *Cascade* is very easy to install—almost as easy as a curtain rod. The panels never require drilling; there's no punching or drilling of the tub rim.

See Sweet's  $\frac{25c}{FI}$  in Architect's,  $\frac{7b}{FI}$  in Builder's—or write for Catalog and prices.



**FIAT METAL MANUFACTURING COMPANY**  
Three Complete Plants: Franklin Park, Ill. (Chicago suburb)  
Long Island City 1, New York • Los Angeles 33, California  
In Canada: Porcelain and Metal Products, Ltd., Orillia, Ontario





face the future... **FACE IT WITH  
REYNOLDS  
ALUMINUM**

Store front of Ludwig Baumann's Hartford, Conn., branch using Reynolds Lifetime Aluminum embossed corrugated sheet and extruded sections. Architect: Morris Lapidus, New York, Contractor: Julius Greenberg Co., Hartford.

To adapt Reynolds standard aluminum building products to special purposes is an obvious economy...and a challenge to the designer's originality. Reynolds Lifetime Aluminum Corrugated is a good example. In .019" and .024" thickness, it is used increasingly for interior and exterior facings, ornamental trim, canopies, etc. Reynolds .032" Corrugated is, of course, a recognized specification for industrial roofing and siding.

Consider the adaptation of Reynolds Aluminum Residential Windows (casement, double-hung and awning, with fixed and picture window combinations) ...and the rustproof durability of Reynolds Lifetime Aluminum Gutters. Check the convenience of Reynolds Aluminum Reflective Insulation wherever you require efficiency without bulk plus perfect vapor barrier. You get the advantages of Aluminum at low initial cost and with labor-saving application through well developed methods. Write for literature. Reynolds Metals Company, Building Products Division, 2015 South Ninth Street, Louisville 1, Kentucky.

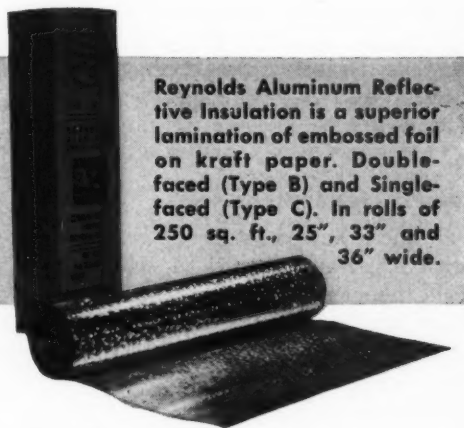


This Kansas City apartment building uses 306 Reynolds Aluminum casement windows. Architect: J. F. Lauck. Owner-BUILDER: George C. Norton. Write for catalog showing also Reynolds new awning window.



One of thirteen industrial, commercial and school buildings designed and built by George Mole in the Amityville, L. I. area—all roofed with Reynolds .032" Industrial Corrugated.

Remember, aluminum flashing costs far less than any other rustproof material. Works easiest, looks best. Specify Reynolds Lifetime Aluminum Flashings—rolls or flat sheet.



Reynolds Aluminum Reflective Insulation is a superior lamination of embossed foil on kraft paper. Double-faced (Type B) and Single-faced (Type C). In rolls of 250 sq. ft., 25", 33" and 36" wide.

Military demands for aluminum limit supply of these products. Reynolds is rapidly expanding aluminum production. Keep checking your supply source.



# REYNOLDS ALUMINUM



Above: New Britain General Hospital, New Britain, Conn. Planned by Justin M. Kearney, Hospital Consultant. Installation, Edwin L. Powell & Co., Inc., Boston, Mass. Pastel Green Kalistron covers corridor wainscoting.

## UNBELIEVABLE DURABILITY

*on our hospital walls...*

That's the comment frequently heard about Kalistron wall-covering installations. When walls, doors, columns or furniture are covered with Kalistron, they literally defy the wear and tear of "heavy duty" service. Years after installation, the Kalistron is still in excellent condition . . . unmarred, unscratched, with practically no sign of wear.

Kalistron is different because its color is fused to underside of clear sheet of wear-resistant Vinylite. Since nothing can touch this under-surface, Kalistron's beauty stays fresh and new-looking.

Kalistron cannot chip, crack or peel; minimizes maintenance costs. Cleans easily with a damp cloth. In 28 standard colors: special colors matched.

SEND COUPON BELOW for sample of Kalistron and nail-file. Test Kalistron yourself . . . prove its unbelievable durability.

**Kalistron**  
PAT. APPLIED FOR  
—COLOR FUSED TO UNDERSIDE  
PLASTIC COVERING MATERIAL

U. S. Plywood Corp., Dept. F-97  
55 West 44th St., New York 18

Please send me FREE Nail-File Test (swatch of Kalistron plus actual nail-file) and folder "Facts About Kalistron."

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

Distributed by: U. S. PLYWOOD CORPORATION, N. Y. C. and  
by: DECO SALES, 408 Freylinghuysen Ave., Newark, N. J.  
In Canada: PAUL COLLET & CO., LTD., MONTREAL

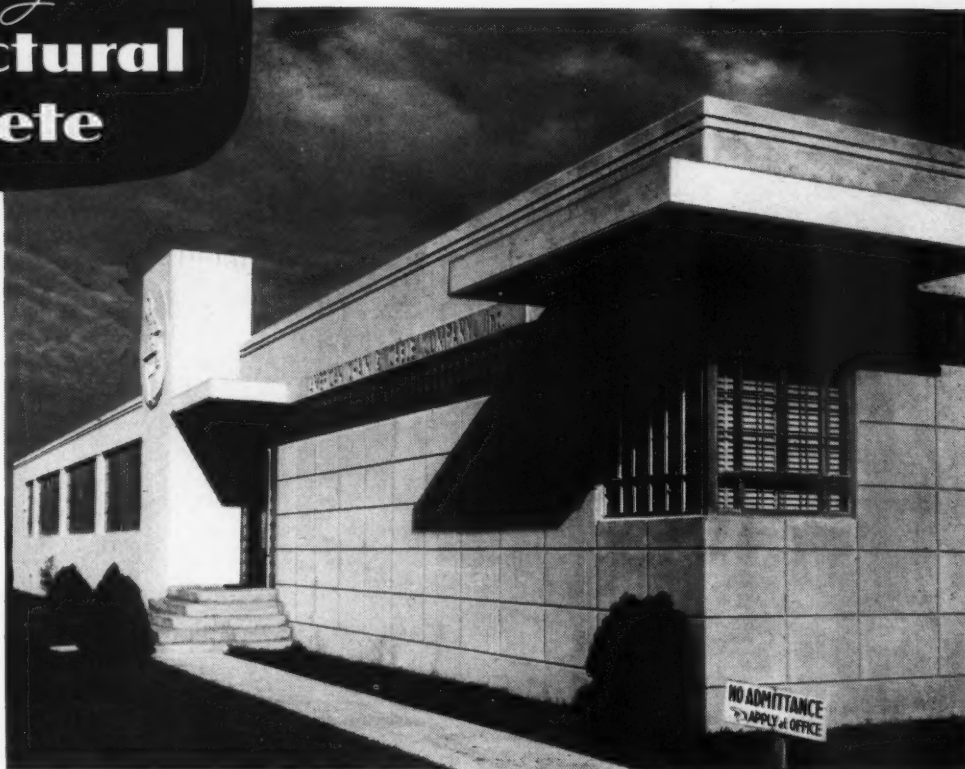
†TRADEMARK

Color fused to  
underside of  
transparent vinyl  
sheet . . . backed  
by flocking

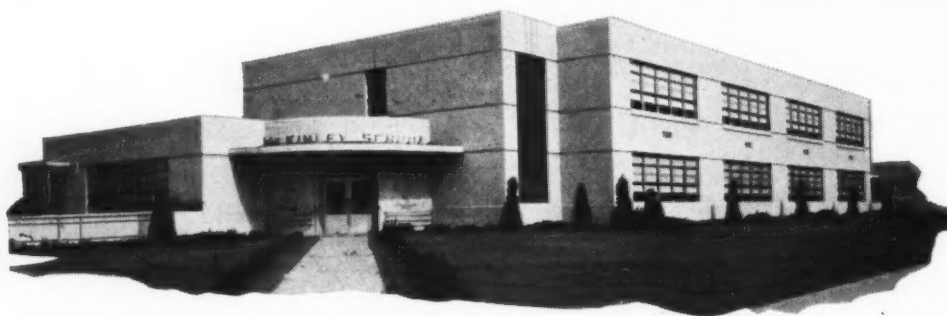
*Save critical materials  
by designing in*  
**Architectural  
Concrete**

To meet immediate and near-future requirements many cities need more industrial plants, schools and hospitals. These structures are needed despite critical shortages of some building materials.

In filling these needs, architects can best serve all concerned by designing in architectural and reinforced concrete, which requires a minimum of critically short materials.

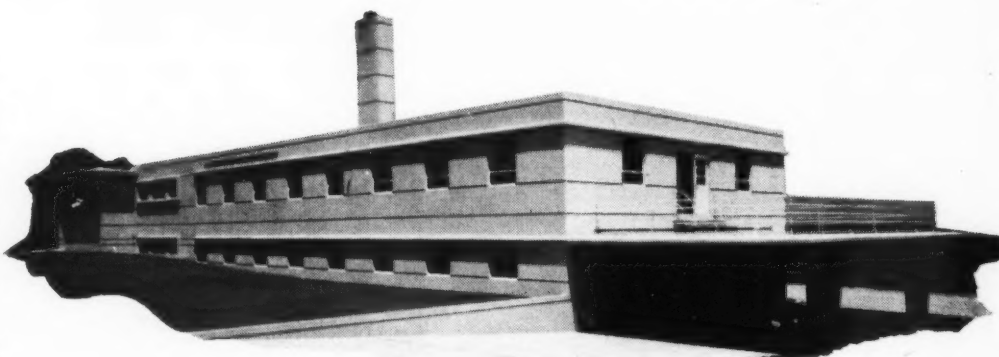


You can design economical, durable, firesafe industrial plants in architectural concrete. They can be functionally practical yet look clean, neat, attractive.



For schools architectural concrete's strength, weather resistance and firesafety meet all structural requirements and give students and teachers utmost comfort and protection. The beauty you can design into concrete schools will make the city proud for generations.

Hospitals, like other architectural concrete structures, are moderate in first cost, require less maintenance and give long years of service. Result: **low annual cost.** For more information send for free literature. Distributed only in the U. S. and Canada.



**P O R T L A N D   C E M E N T   A S S O C I A T I O N**

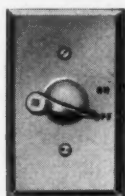
DEPT. 5-8, 33 WEST GRAND AVENUE, CHICAGO 10, ILLINOIS

A national organization to improve and extend the uses of portland cement and concrete through scientific research and engineering field work



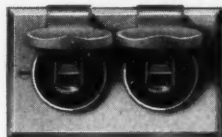
## Out-of-Doors IDEAS

TO HELP YOU  
WHEN YOU SPECIFY  
**H & H WIRING DEVICES**



### FLUSH SWITCHES

Outlet box or wall case switches for installations exposed to weather, dampness, etc. Perfect for patio, porch, garage.



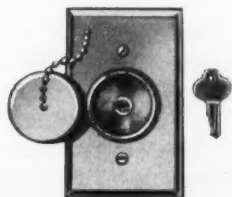
### LID RECEPTACLES

Automatically closing lid protects contacts from weather whenever plug is withdrawn. Makes smart, convenient receptacle. 15A, 125V; 10A, 250V.



### SINGLE LID RECEPTACLE

Same type as above, but with one receptacle only. Units are complete with receptacle, cadmium finished plate, and weatherproof mat.



### LOCK SWITCHES

With Corbin Pin Tumbler Locks

Outdoor switch control for property protection. Rotary type lock. Weatherproof mat, plate, and screw cap.



## PLAN for ELECTRICAL CONVENIENCE FOR *FUN and WORK OUTDOORS* WITH **H & H** WIRING DEVICES

Those plans on your board mean someone is building for the future. Your skill and knowledge can contribute much to making that future complete, by making it more livable electrically. There's where the H & H line of wiring devices can do a job. You'll find just the device to meet every specification for adequate wiring. A quick review of our line stocked by electrical distributors may spark a good idea, or solve a special problem for you. Plan to investigate these smart, modern, dependable devices today.

For more information, write today to 1905 Laurel Street, Hartford 6, Connecticut. Good Housekeeping Building Forum booklet "Electrical Planning in the Home" sent on request.

QUALITY-MINDED ARCHITECTS SPECIFY

WIRING  
DEVICES



ENCLOSED  
SWITCHES

THE ARROW-HART & HEGEMAN ELECTRIC COMPANY  
HARTFORD, CONNECTICUT

Branches in: Boston, Chicago, Cleveland, Cincinnati, Dallas, Denver, Detroit, Los Angeles, New York, Philadelphia, San Francisco, Syracuse. In Canada: Arrow-Hart & Hegeman (Canada) Ltd., Mt. Dennis, Toronto.

## FOR BUILT-IN SAFETY THAT WON'T WEAR OUT...

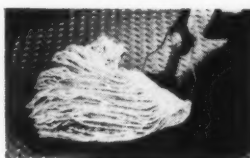
### A.W. SUPER-DIAMOND

ROLLED STEEL FLOOR PLATE



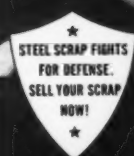
**GRIPS WITHOUT A SLIP.** Engineered design of SUPER-DIAMOND puts 40 traction points in every footstep. All-over pattern gives foot-safety from every angle.

**EASY TO CLEAN.** SUPER-DIAMOND has no dirt-catching corners. It's easy to clean with hose, mop or broom.



**EASY TO MATCH.** All-over pattern makes SUPER-DIAMOND easy to match—end to end or side by side. SUPER-DIAMOND can be cut and installed with virtually no waste.

Send for new SUPER-DIAMOND folder S-54. No obligation.



## A.W. SUPER-DIAMOND

FLOOR PLATES THAT GRIP

## ALAN WOOD STEEL COMPANY

CONSHOHOCKEN, PA.

Over 125 Years of Iron and Steel Making Experience

OTHER PRODUCTS: A. W. ALGRIP ABRASIVE Floor Plate • PERMACLAD Stainless Clad Steel Plates • Sheets • Strip • (Alloy and Special Grades)



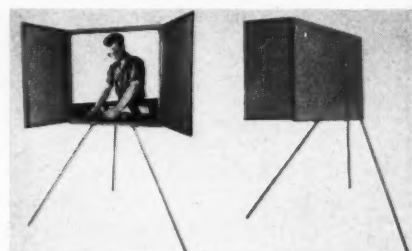
## Architectural Engineering

### PRODUCTS

(Continued from page 251)

#### Daylight Projection Screen

A new Radiant screen now available is said to permit movie and slide projection in lighted rooms. With the screen, blinds and windows may be left open and normal ventilation may be retained in rooms where darkening equipment is difficult or expensive to install. The viewers may take notes during projection and supplementary visual aids can be employed



Screen permits projection of slides and movies in fully lighted rooms

simultaneously. The screen has an unbreakable wide-angle projection surface and is equipped with doors which protect it and permit safe storing. The viewing surface measures 40 by 40 in. and the total weight is less than 22 lb. A feature of the design is a tilting chain which makes it possible to tilt the screen to the most desirable viewing angle for the audience. Radiant Mfg. Corp., 2627 W. Roosevelt Rd., Chicago 8, Ill.

#### Oil Base Paints

Reported to be completely odorless, the *Spectro-Matic Tinting System* consists of only 12 tubes of colors in three sizes, which, when mixed with one of two white bases, provides 300 or more true spectrum colors. May be obtained in flat, semi-gloss, high-gloss, quick dry enamel, floor enamel and house coat finishes, in gallons, quarts and pints. As an added convenience to the professional man, a convenient color kit is provided which contains tubes of the entire tinting system. Included in the kit are three 8 by 10 books of actual

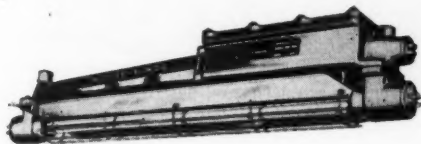


PRODUCTS

paint color samples and a room color selector, which enables the architect or decorator to show color swatches and mix a sample on the spot in a matter of minutes. The tinting system was styled by the Rahr Color Clinic and is based on nationwide surveys. Rockford Paint Mfg. Co., 200 Sayre St., Rockford, Ill. New colors will be added from year to year to answer future demands for popular color trends.

**Explosion-Proof Germicidal Lamp**

A new *Crouse-Hinds* type EVF germicidal lamp fixture, reported to be explosion proof, consists of a tube of Vycor glass which houses the lamp and which is sealed at each end into aluminum end-castings. The end-castings have threaded



Explosion-proof housing guards against accidents with germicidal lamps

covers to facilitate access and re-lamping, and the glass is described as having extremely high ultra-violet transmission. A rigid structure consisting of the aluminum ballast housing and extension piece support the two tube end-castings, and a variety of flexible attachments permit the unit to be mounted in any position. The fixture is designed to accommodate General Electric or Westinghouse single-pin G36T6 Slimline germicidal lamps. Design and construction are said to be in strict accordance with Underwriters' Laboratories requirements for equipment for Classes I and II for hazardous locations. Optional equipment includes a reflector to protect personnel from direct ultra-violet radiation and a lamp tube guard to prevent tube breakage. Crouse Hinds Co., Wolf and 7th North, Syracuse 1, N. Y.

(Continued on page 260)

**For Gleaming, Corrosion-Resistant Interiors**



**Cuts Your Material Costs  
Puts New Beauty in Your Designs**

Wondering how to make a new interior *completely* modern—or put new beauty in an old one? PERMACLAD Stainless Clad Steel may be your cost-cutting answer.

We make PERMACLAD by diffusion-welding a layer of stainless steel *inseparably* to a mild carbon steel backing. *Result:* PERMACLAD has the lasting, corrosion-resistant beauty of solid stainless and the cost-cutting, easy-forming qualities of mild steel.

The stainless layer is usually 10% or 20%, but may be more or less if desired. Also, reduction of weight is possible through the use of A.W. DYNALLOY, low-alloy, high-strength steel as a backing in place of ordinary mild carbon steel.

Doors, panels, escalators, wall panels, and interiors of all kinds can be fabricated easily with PERMACLAD. For technical data write for our free, 8-page Booklet P-88. Our engineering staff will be glad to talk with you about any specific problem and make installation suggestions.

FOR BETTER PRODUCTS AT LOWER COST... Specify PERMACLAD

Over 125 Years of Iron and Steel Making Experience

**PERMACLAD** Stainless Clad Steel  
**ALAN WOOD STEEL COMPANY**  
Conshohocken, Pa.

Gentlemen: Please send me additional information on PERMACLAD Stainless Clad Steel—and a copy of your free, 8-page Booklet P-88.

Name \_\_\_\_\_  
Title \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

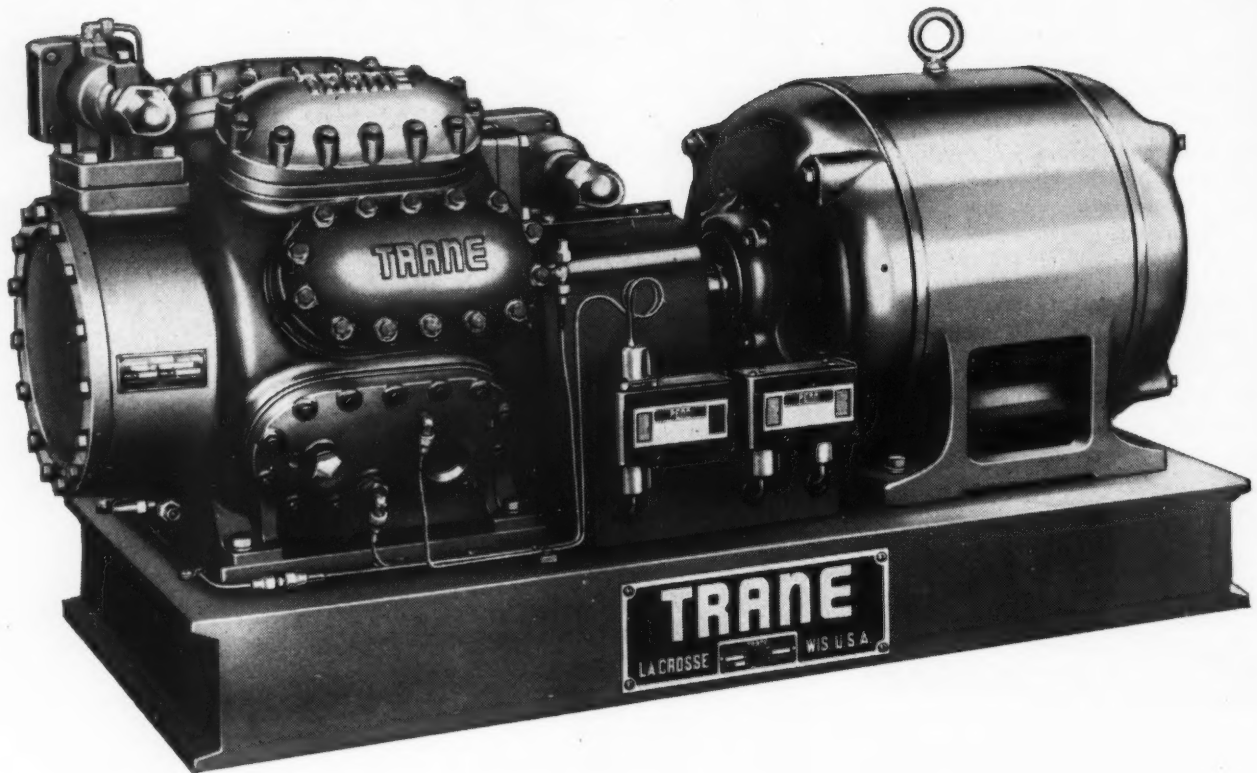
Other Products: A.W. ALGRIP Abrasive Floor Plate • A.W. SUPER-DIAMOND Floor Plate • Plates • Sheets • Strip • (Alloy and Special Grades)





MODERN DESIGN FOR

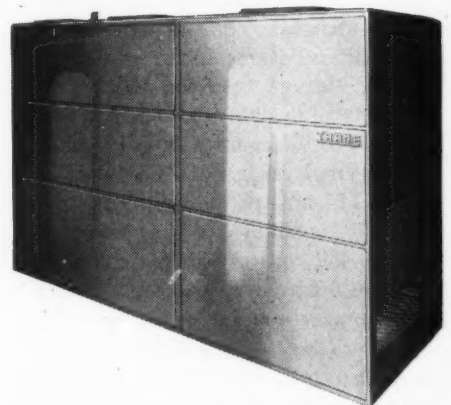
# TRANE refrigeration



## Now! New 15 and 20-Ton Self-Contained Air Conditioners

### A Complete System in an Easy-to-install Package

Everything for complete air conditioning—compressor, condenser, evaporator and fans—in one compact unit. Factory engineered, built and assembled so only simple water piping and electrical connections are required. Available with water cooled or evaporative condensers built right into the unit. For the consulting engineer—an easy-to-specify, easy-to-install unit on the medium sized job. For the heating contractor—an easy way to get into the profitable air conditioning business.



MANUFACTURING ENGINEERS OF AIR CONDITIONING, HEATING

**PLUS PERFORMANCE—**

# for air conditioning

Now, more than ever before, TRANE provides a single, reliable source for creating the weather conditions demanded by today's building design. TRANE refrigeration and air conditioning products including coils, units of all kinds and fans, are designed together and built together for use together.

In the complete TRANE line there are both centrifugal and reciprocating compressors—offering a wide range of capacities from 3 to 200 tons. What's more, TRANE offers you *both* types of compressor equipment so that you can select precisely the kind of equipment that is right for your job.

**Power saving unloader operation! Drastically reduced valve wear!**

## **TRANE RECIPROCATING COMPRESSOR**

This new masterpiece of modern design provides reduced power requirements as air conditioning loads are reduced—provides smoother, quieter operation over a longer period of time.

Cylinder loading and unloading is completely automatic as loads increase or decrease.

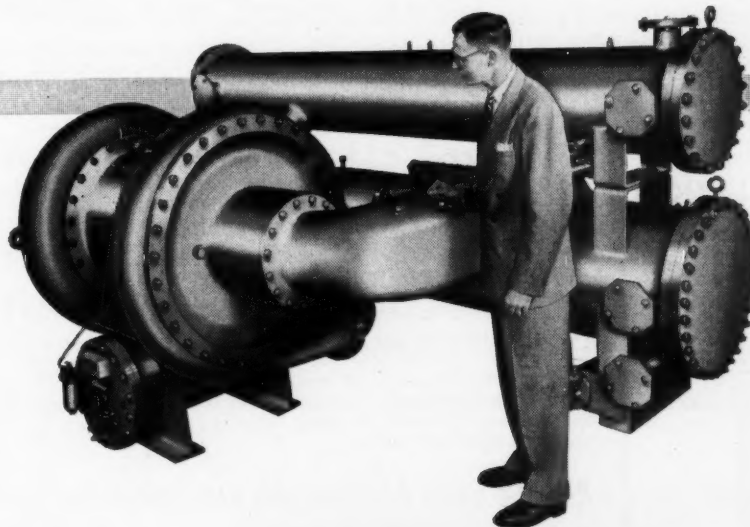
Special design keeps refrigerant always free of dirt and oil.

Available with condenser mounted on top. In sizes up to 50 tons.

See TRANE Bulletin DS-361 for further information.

## **TRANE CenTraVac**

First hermetically sealed centrifugal compressor! First in capacities as low as 45 tons! Capacities range from 45 to 200 tons. When air conditioning loads are reduced the TRANE CenTraVac automatically responds with lowered power consumption. This means power economies.



# TRANE

THE TRANE COMPANY, LA CROSSE, WIS.  
Eastern Mfg. Division, Scranton, Pa.  
Trane Company of Canada, Ltd., Toronto  
Offices in 80 U.S. and 14 Canadian Cities

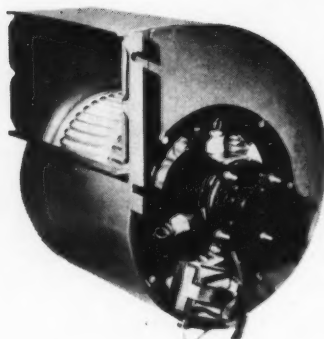
**AND VENTILATING EQUIPMENT**

## PRODUCTS

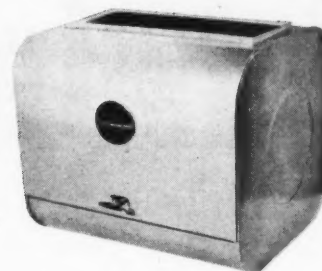
(Continued from page 257)

### Quiet Furnace Blower

Reported to insure silent operation as a result of its spring-suspended motor, the *International Blower Package* is described by the manufacturer as the only one of its kind currently on the market. Designed for all gravity warm air furnaces up to 80,000 Btu register



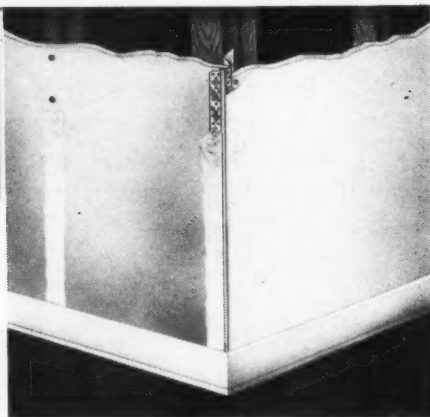
Spring suspended blower, left, is housed in attractive metal cabinet, below.



## SOMETHING NEW for FASTER, EASIER Drywall Construction ---

### Robinson's METAL PROTECTOR CORNER BEAD

DESIGNED SPECIFICALLY FOR  
DRYWALL CONSTRUCTION

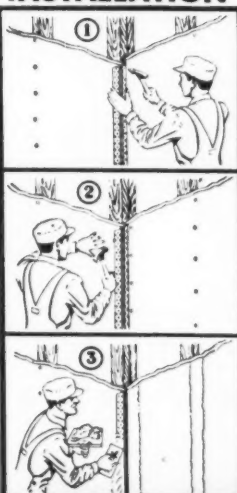


We are introducing for the first time on a national scale a completely new idea for lower cost home and industrial construction. Realizing the importance of the role the Architects of America play in constantly endeavoring to help their clients to better construction at reduced costs we present this product originally designed and patented by a progressive contractor for use in his own building operations. It filled such a definite need in dry wall construction as to earn an immediate and whole-hearted acceptance by the building industry.

Our engineers' tests have proved that time saved in the installation of Robinson's Metal Protector Corner Bead results in lower costs than any other product now on the market.

It strengthens and protects corners, arches, windows and doors where wood casing is not used. It uses only two coats of joint cement — completely eliminates paper tape on corner joints — has triple reinforced corners of three 90 degree bends providing great rigidity — is over-locked and under-locked to give added strength wherever used. It makes permanent, perfectly true corners that can't be cracked or chipped. Just the small metal corner bead shows when joint is finished. This bead available for  $\frac{3}{8}$ " and  $\frac{1}{2}$ " drywall.

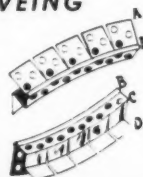
### INSTALLATION



(1) The first sheet of drywall put up should extend out over the corner stud  $\frac{1}{2}$ ". Where possible use finished edge of drywall for all corners. If drywall is put on horizontally put up both sheets and nail as usual except for corner. When ready to nail corner, slip metal corner bead over the  $\frac{1}{2}$ " that extends out over the stud. Be sure this corner is straight and plumb. Don't nail yet. (2) Now put up the other sheet of drywall and nail it in the usual manner including the corner edge. When this is done, go back and nail the first side of the corner bead and your corner is finished with no extra nailing. (3) It is now ready for the joint cement. Apply cement in usual manner being sure to work cement into perforations in metal bead for permanent bond. It takes very little cement to make a straight flush corner.

### BENDS FOR ARCHES AND COVEING

First cut the perforated face of bead (leaving three perforations between each cut) from edge A to bead B. Cut up to but not into or through bead. Then cut the plain flanges C and D (leaving two perforations for each cut). Cut up to the bend C. The corner bead is now ready to be bent in any curve or angle. Robinson's Metal Corner Bead is ideal for finishing around Metal Casement Windows.



MANUFACTURED BY  
**ROBINSON CONSTRUCTION**  
3924 North 16th Street OMAHA, NEBRASKA

SEND FOR FREE  
LITERATURE  
AND SAMPLE

output, the blower is available in two models, capable of providing 600 and 800 cfm at .2 static pressure. The motor is of the direct-drive type, and noisy belts and pulleys are eliminated. Budget-priced for small homes, the package features two 10 by 20 by 1 in. air filters, either  $\frac{1}{10}$  or  $\frac{1}{8}$  hp direct-drive motor with optional speed control and a convenient access door on the back. The cabinet is 21 by 18 $\frac{1}{2}$  by 18 $\frac{1}{2}$  in. and is finished in gray baked-on enamel. International Oil Burner Co., Spring and Park Aves., St. Louis, Mo.

### Fireproof Plaster Partition With Expanded Metal Core

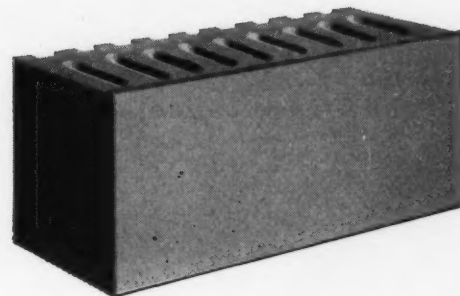
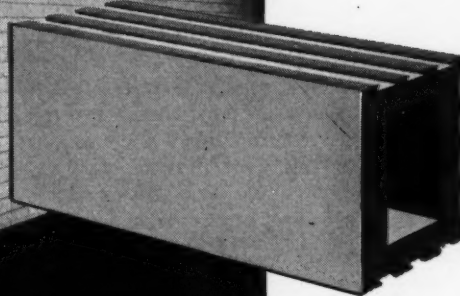
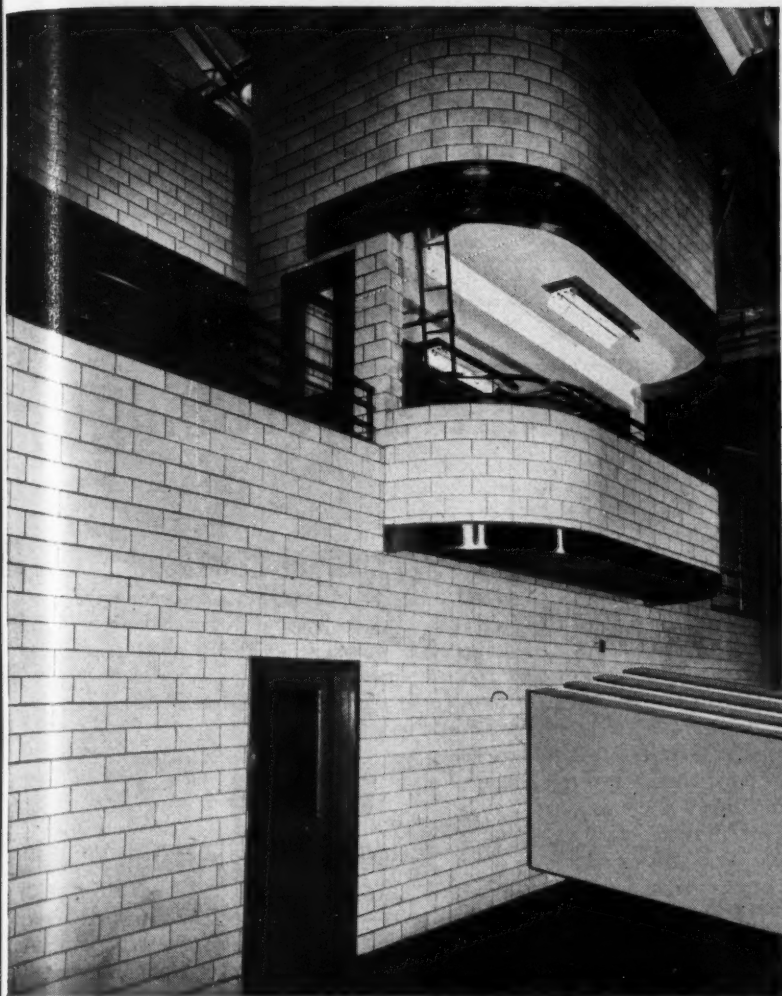
Research sponsored jointly by the Perlite Institute and the Metal Lath Manufacturer's Association has resulted in the development of a 2 $\frac{1}{2}$  in. solid plaster partition described as the thinnest and lightest non-bearing fire-resistant wall ever devised. The partition has been given an Underwriters' Laboratories fire endurance rating of two hrs. Composed of solid gypsum plaster mixed with lightweight, insulating perlite aggregate, the compound for the partitions is applied on both sides of a reinforcing base of expanded metal lath on  $\frac{3}{4}$  in. channel studs to a total thickness of 2 $\frac{1}{2}$  in. When the panel is exposed to fire, the perlite insulates against heat transfer, while the gypsum releases water in the form of steam, absorbing and dissipating heat. The tensile strength of steel in the metal lath reinforces the plaster against spalling and destruction under high temperatures. Primary use for the product is expected to be as partition walls around stairwells, elevator shafts and other critical locations for which building codes require a two hr. enclosure. It will reportedly cost less than any other partition offering equal fire protection. Metal Lath Mfg. Assoc., Engineers Bldg., Cleveland 14, Ohio.

(Continued on page 264)



# Clay can keep you building while steel is short

## Use Structural Clay Facing Tile For Interiors of Essential Buildings



### Further Information

on how STRUCTURAL FACING TILE can help you build when steel is critical is available in our special bulletin "CONSERVATION OF CRITICAL MATERIALS." For your free copy, just ask any Institute Member or drop us a line on your own letterhead. Send your request to Dept. AR-5.

### Facing Tile Saves Steel!

Load-bearing Facing Tile walls save structural steel. Reinforced tile lintels save additional structural steel. Masonry design saves metal lath and steel channels.

### Facing Tile Goes Up Fast!

It is a modular-sized, large construction unit. It saves costly cutting and fitting of material. It builds the wall and attractive finish at one time.

### Facing Tile is Available!

Increased production makes Facing Tile available for essential building. Orders placed now will receive prompt scheduling and delivery as needed.

LOOK FOR THIS SEAL. It is used only by members of the FACING TILE INSTITUTE . . . these "GOOD NAMES TO KNOW"



THIS SEAL is your assurance of highest quality Facing Tile


BELDEN BRICK CO.  
Canton, Ohio  
CHARLESTON CLAY  
PRODUCTS CO.  
Charleston 22, West Virginia  
THE CLAYCRAFT CO.  
Columbus 16, Ohio  
HANLEY CO.  
New York 17, New York

HOCKING VALLEY BRICK CO.  
Columbus 15, Ohio  
HYDRAULIC PRESS BRICK CO.  
Indianapolis, Indiana  
MAPLETON CLAY  
PRODUCTS CO.  
Canton, Ohio  
METROPOLITAN BRICK, INC.  
Canton 2, Ohio  
McNEES-KITTANNING CO.  
Kittanning, Pennsylvania

NATIONAL  
FIREPROOFING CORP.  
Pittsburgh 22, Pennsylvania  
ROBINSON BRICK & TILE CO.  
Denver 9, Colorado  
STARK CERAMICS, INC.  
Canton 1, Ohio  
WEST VIRGINIA BRICK CO.  
Charleston 24, West Virginia

# FACING TILE INSTITUTE

1520 18th Street, N.W., Washington 6, D. C.  
1949 Grand Central Terminal, New York 17, N. Y.



# Five ways to pick the right architectural magazine for your building product advertising

## 1 COMPARE CIRCULATION:

Architectural Record reaches more architects and engineers than any other magazine in its field. Market-wise, the Record's subscribers verifiably design—and specify the products that go into—83% of the dollar volume of all architect-engineer designed buildings.

## 2 COMPARE EDITORIAL CONTENT:

Architectural Record is the one magazine edited specifically for architects and engineers. And every issue of the Record covers the *full range* of the active architect's and engineer's design interest in a wide variety of building types, both non-residential and residential. Furthermore, Architectural Record is the one magazine whose editorial emphasis on individual *types* of buildings is adjusted continuously to the rate at which these buildings are being planned by architects and engineers as shown by *Dodge Reports*.

## 3 COMPARE READERSHIP:

Architects and engineers have voted Architectural Record their preferred magazine in 35 out of 41 reader preference studies *sponsored by building product manufacturers and agencies*.

## 5 COMPARE ADVERTISING VOLUME:

Year after year (and again in 1952) more building product manufacturers buy more pages of advertising in Architectural Record than in any other architectural magazine. That is a convincing testimonial to the proven advertising effectiveness of the Record.

## 4 COMPARE COSTS:

Architectural Record offers you concentrated coverage of the largest architect and engineer audience at the *very lowest cost per page per thousand*.

All five basic points of magazine comparison point to Architectural Record as the *right* architectural magazine for your building product advertising.

Industrial building for the Electrolux Corporation first presented to architects and engineers in Architectural Record. Architects: Raymond and Rado. Photographer: Joseph W. Molitor.



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LUME:  
1952)  
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ecord.

# Architectural Record

"Workbook of the  
active architect  
and engineer"



119 West 40th St.  
New York 18, N. Y.  
LOngacre 3-0700





## PRODUCTS

(Continued from page 260)

### Cavity Wall Insulation

Cavity walls affording increased insulation comfort at both lower maintenance and construction costs than those of conventional masonry walls are claimed to have been achieved with a new type of construction employing pouring-type *Fiberglas Cavity Wall In-*



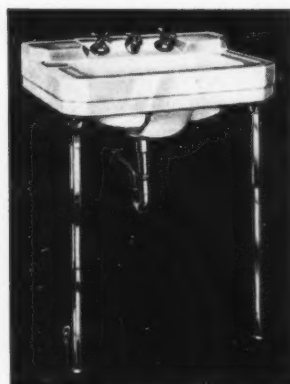
Insulation is poured directly into cavity from large kraft bags, handles easily

For every style and price requirement...

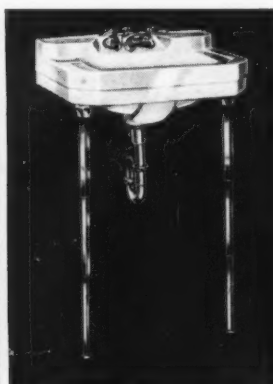
## Case Vitreous China Lavatories



WINDELL #785. Matches the Case One-Piece\* Water Closet in design and quality. Square basin, anti-splash rim, ledge back. 24" x 20".



WILLARD #850. Front Overflow, anti-splash rim, slanted control panel. 22" x 18" and 24" x 20".



COSMETTE #940. Square basin lavatory with control panel recessed in shelf. 20" x 14½" and 24" x 17½".



AVON #912. Wall hung lavatory with 6" back. Excellent quality at moderate cost. 20" x 18".



WINCHESTER #923. A low-cost fixture with spacious oval basin, front overflow. 18" x 15½" and 19" x 17".

● There is no need to depart from Case quality, whether you are planning custom-built homes, low-cost housing, or commercial, industrial, or institutional structures. These examples show how conveniently you can meet every requirement of utility and appearance—at a price befitting the job—while providing the most advanced engineering and dependable performance. The line of Case water closets and urinals is no less complete. For distributors, see your Classified Telephone Directory, or write W. A. Case & Son Mfg. Co., 31 Main St., Buffalo 3, N. Y. Founded 1853.

**Case** *Fine Vitreous China*  
\*PATENTED

sulation. The new method was developed by the Structural Clay Products Research Foundation. The insulation material, made of inorganic nodules of fibrous glass, was chosen because of its good thermal resistance, a density low enough to support the material's own weight without settling, and for its ability to resist moisture, rot, termites and fire. Since it is poured into the cavity from large kraft bags, handling of the material is said to be easy. Resultant savings in labor time are reported to afford lower costs than cavity walls requiring furring and lathing, which this does not. The wall consists of two wythes of brick, or one brick and one tile, between which is an air space not less than 2 in. wide. Non-rusting metal is used to tie together the two wythes. Since the insulation is poured into the cavity, care must be taken to smooth the mortar squeezed from the joints on the inside of the cavity, so that the insulation will not catch onto rough ledges as it is poured into the space. Also, the inner wythe, following the smoothing of its cavity side, must be given a brush coat of vapor-resistant water emulsion asphalt paint. This type of paint is recommended because it can be applied cold. To facilitate these two special steps in the process, the inner wythe is built upward ahead of the exterior by at least 16 in. during construction. The insulation is packaged in 30 lb bags which will fill about 37 to 45 sq ft of wall having a cavity 2 to 2½ in. wide. Owens-Corning Fiberglas Corp., Toledo 1, Ohio.

### Green Paint Furnishes Slate-Like Writing Surface

Transformation of any surface into a writing board is reported to be possible now with *Sapolin Rite-On-Green* paint. The paint, when brushed or sprayed on such materials as Masonite, plywood, wall-board or metal, is said to create the same slate-like qualities of expensive chalk-board in a non-glaring green color. The manufacturer states that the paint takes erasing well with ordinary chalk erasers and can be washed clean without harm to the finish. It is recommended for playrooms, kitchens, areas near telephones, and for bulletin boards, interchangeable advertisement signs, and visual aid purposes, as well as for schools. Application is reportedly simple, with one coat sufficing for most surfaces, although new wood, plywood or other exceptionally porous surfaces require two coats. Sapolin Paints, Inc., 229 E. 42nd St., New York, N. Y.

(Continued on page 268)

# 3 Reasons why...

Architects Specify  
Builders Certify  
Electricians Recommend

*Blo-Fan*  
and  
*Pry-Lites*



No kitchen is complete or modern without a Blo-Fan electric exhaust ventilator. Its patented blade combines the volume of a breeze fan with the power of a blower. Its attractive grille is removable *without tools* and the motor assembly merely lifts out for easy cleaning. A Pry-Lite modern recessed lighting fixture completes the picture.

Easy to clean or relamp, Pry-Lites have snap-on fronts. No screws, no hinges, no nuts—and no tools needed. Pry-Lites (1000 series) have a built-in pull box, adjustable mounting straps that eliminate framing-in time, a plaster flange which fits any finish, and they are U.L. approved for any standard building wire.

In the bath . . . Pry-Lites and Blo-Fan go together—Pry-Lite recessed lights give perfect illumination without glare—and elimination of offensive odors and steam-streaked walls is assured with a Blo-Fan exhaust ventilator.

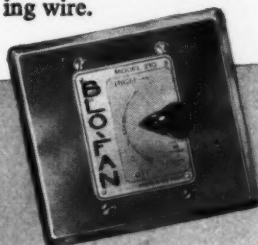
*Blo-Fan*

America's Most Imitated Home Ventilator

*Pry-Lites*

The Original Recessed Lights with Snap-on Fronts

\*Trade Mark Reg.



**9 SPEED SWITCH**

This exclusive Blo-Fan feature makes it as easy to regulate the rate of ventilation as it is to control the speed of a car. Standard equipment on De Luxe Model 210 Blo-Fan only.

**PRYNE AND COMPANY**

BOX R-52, POMONA, CALIFORNIA

Eastern Factory: 124 Adams St., Newark, New Jersey

Warehouses: Los Angeles, San Francisco, Chicago, Atlanta

Stocked by more than 650 wholesalers in over 350 cities.



# We'll keep your material moving

... anything, from light-duty freight to power trucks for scheduled vertical-linkage in your materials handling system.

We can offer you the economy of standard freight elevators for regular service. And special adaptations for the unusual. Plus uninterrupted operation.

We deal in height. Moving material and men vertically. More than half of the world's freight moves on Otis elevators. Our broad experience is available, without charge, to everyone.

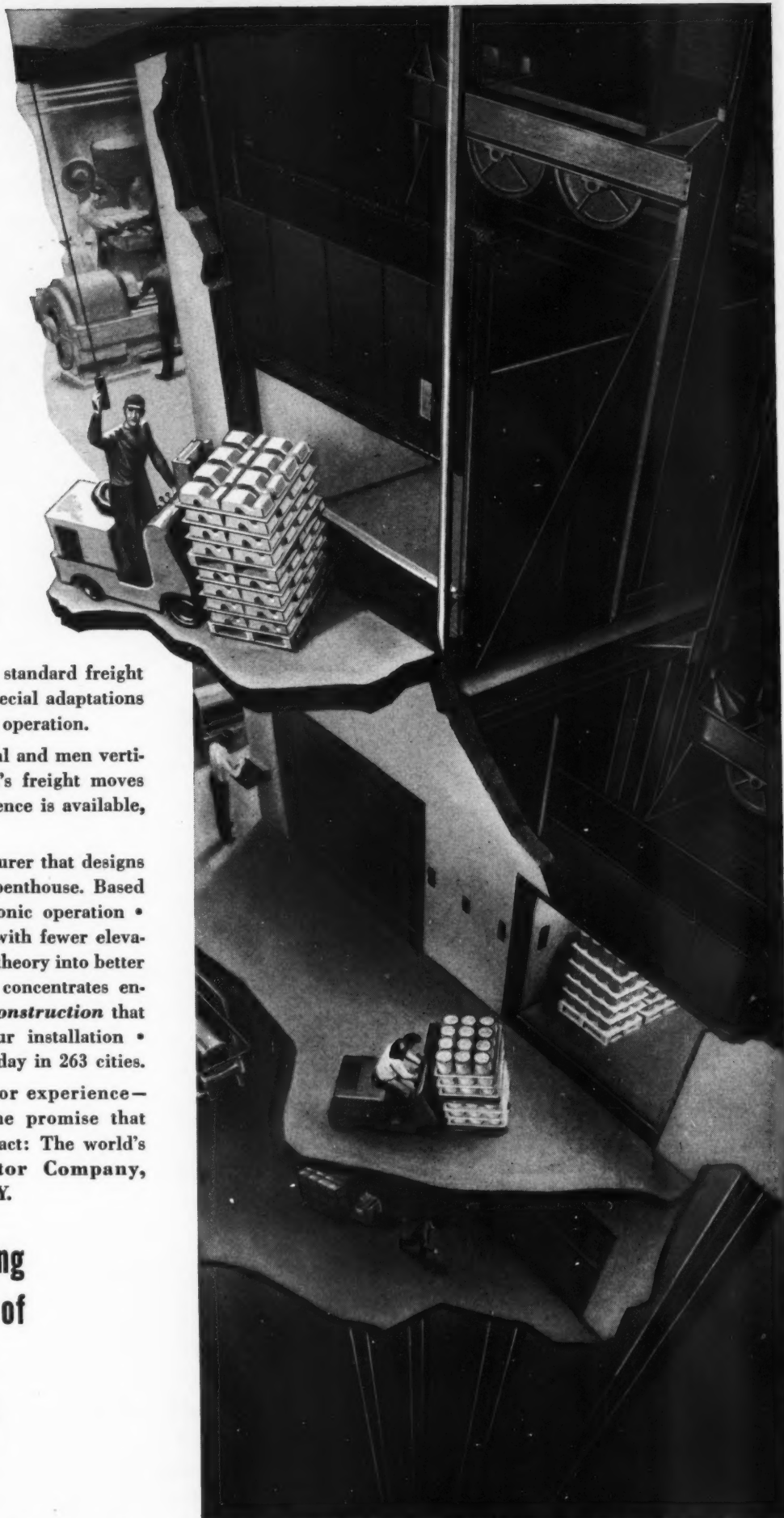
Otis is the only elevator manufacturer that designs and builds everything from pit to penthouse. Based on: **Research** that advances electronic operation • **Planning** that gives better service with fewer elevators • **Engineering** that turns tested theory into better elevating • **Manufacturing** that concentrates entirely on vertical transportation • **Construction** that brings elevator-trained men to your installation • **Service** that's available 24 hours a day in 263 cities.

This background of elevator experience—*unequalled anywhere*—delivers the promise that forms the basis of every Otis contract: The world's finest elevating. Otis Elevator Company, 260 11th Ave., New York 1, N. Y.

Better elevating  
is the business of

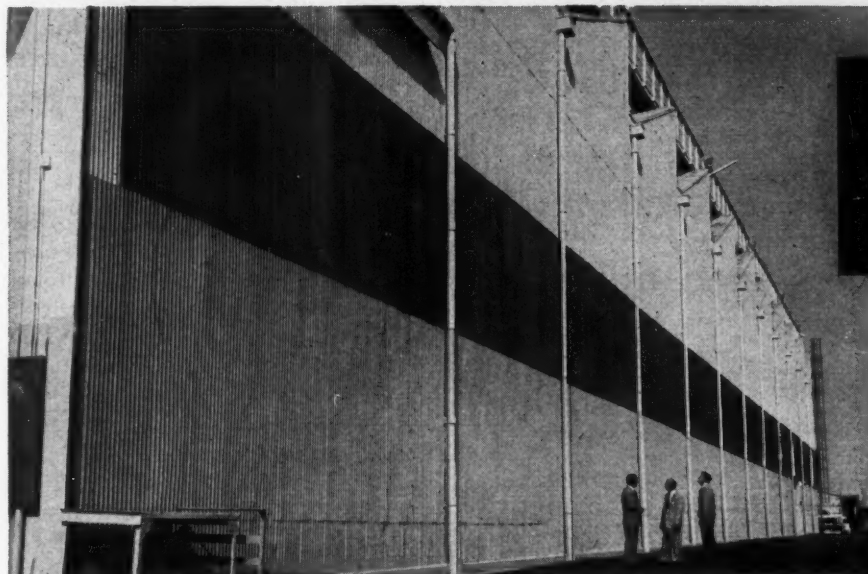


Passenger Elevators • Freight Elevators • Electric Dumbwaiters • Escalators • Maintenance • Modernization

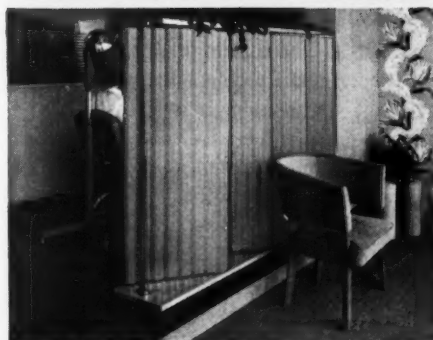




# DOUGLAS AIRCRAFT INSTALLS SHATTERPROOF *Alsynite*



**SIDEWALL INSTALLATION** at Douglas Aircraft Plant, El Segundo, Calif.—corrugated metal siding was removed and replaced with Alsynite panels. No additional framing required. Lap-joints sealed with mastic. Light diffusion throughout interior greatly increased due to refractive action of Alsynite.

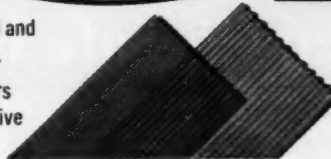


**ALSYNITE DECORATIVE PARTITION** is shown above. Alsynite has unlimited possibilities for practical use in homes, offices, stores, as well as for industrial "daylighting."



Corrugated and flat panels.

Seven colors for decorative uses.



The sensational new material for shatterproof skylights, windows, walls and partitions

**Costs less to install!  
Cuts lighting costs!**



**ALSYNITE MAKES** new and unlimited daylighting possible for buildings of all types. Alsynite is a new kind of structural glass made by combining glass fiber with resin. It is shatterproof, permanent and feather-light (8 oz. per sq. ft.). It can be sawed, nailed, drilled ... installs exactly like corrugated metal. Like patterned glass, Alsynite lets the light through but can't be seen through. It has a higher light diffusion factor. *Corrugated* Alsynite nests with all standard corrugated roofing and siding. *Flat* Alsynite substitutes for glass in standard windows. Now let daylight in wherever you want it with *shatterproof Alsynite*. Plants in California and Ohio.



**FREE  
SAMPLE!**

**ALSYNITE COMPANY OF AMERICA**  
Dept. A1, 4670 De Soto St., San Diego, Cal.  
Please send free sample of Alsynite with complete info. & name of nearest distributor.

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COMPANY \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_  
DISTRIBUTORS IN PRINCIPAL CITIES

## PRODUCTS

(Continued from page 264)

**Decorative Mirrored Glass**

Creating a light marbled effect, *Antique Gold-Veined Mirror* has been used structurally in the dining room of the Sans Souci Hotel in Miami Beach, designed by Architect Morris Lapidus. Adding a decorative highlight to the decor of apartments, stores, etc., it can



Dining Room of the Sans Souci Hotel  
decorated with antique-mirrored columns

**AUTO BANKING**

*-a subject of engaging interest to every one of your banker clients with a parking problem.*

This modern banking facility not only saves time and trouble for depositors but relieves congestion inside the bank.

If your banker client is interested in a drive-in depository and the present bank building does not lend itself to such an installation, there is always the possibility of installing a drive-in station in the neighborhood of the bank or even in an outlying district.

We have pioneered in the field of drive-in and walk-up windows and are pleased to place our experience, without obligation, at the service of any architect planning such equipment for a bank. For more information see our section in Sweet's File or write for brochure on "Auto Banking," Form 480.



# Herring-Hall-Marvin Safe Co.

Main Offices and Factory in Hamilton, Ohio  
Sales and Service Representatives in All Principal Cities.

also be installed as a fireplace wall, room paneling, or in many other ways. The patterned result of the gold vein running through the mirror lends interesting texture and depth. Available in both light and dark antique, it may also be ordered with an added color to harmonize with other hues in the room. Abbott Glass Company, 160 E. 120th St., New York, N. Y.

**Inexpensive Raised Letter Signs**

Improved manufacturing processes are reported to now make three-dimensional raised letter signs for store fronts as inexpensive as hand painted signs, according to the manufacturer of *Trio* letters. The sign letters are made to individual order from plastic bonded marine board and have a baked enamel finish durable for a minimum of five years, after which they can be renewed by painting. The signs are available in four lettering styles, 157 colors, and a variety of mountings, said to adapt them to any possible application. Trio Letters, Inc., Sandwich, Ill.

**New Paint Products**

Among new paints recently developed are the following products for interior and exterior walls:

- *Cor-O-Last* is described as a long-lasting exterior surfacing which in one application covers a wall with a tough coating that resists water, fire, mildew and adverse weather conditions. The coating is reported to be equivalent to three coats of ordinary paint. It is composed of polymerized soy bean oil, mica flakes, asbestos fiber, chlorinated paraffin and pentachlorophenol, and is said to create a surface that is naturally pliable and that will not crack or peel off. *Con-Creto*, a companion interior finish, contains all the ingredients of the exterior paint with the exception of the bodied oils, which are not necessary since the surface is not exposed to the elements. The interior paint is reported to cover surface defects in walls and to be easily washable. It is also said to be sound deadening, to have insulating qualities and to resist acids, chemicals, scratches and fire. Both products must be applied under pressure and may be obtained with or without sand finish. They may be applied over almost any surface and are available in pastel colors. Con-Cor Paint Co., 2550 Main St., Kansas City, Mo.

(Continued on page 274)



**Passing the  
hardest tests  
in school  
interiors**

**STARK  
GLAZED  
FACING  
TILE**



Archbishop Stepinac High School, White Plains, N. Y.  
Geo. A. Fuller Co., Gen. Contractor; Eggers & Higgins, Architects



**Test for construction costs.** Stark Glazed Facing Tile is a modular-sized unit that saves planning, cutting and fitting costs. You build the wall and finish with one material.

**Test for maintenance.** You never need to paint or refinish walls of Stark Glazed Facing Tile. Cleaning is easy and inexpensive with soap and water.

**Test for service.** Interiors of Stark will last for the life of the school. They virtually won't scratch, mar or break down under

the heaviest traffic. They're permanent as well as fireproof.

**Test for color to aid scholarship.** Stark Glazed Facing Tile is "color-engineered." You can select colors that aid lighting, that raise morale and create a pleasant atmosphere for study and concentration.

**We welcome your inquiries.** If you wish a copy of our New Brochure or other information just address your request to Dept. AR-5. See Sweet's Catalog 4f-St.

**STARK CERAMICS, INC.**

(formerly the Stark Brick Co.)

Canton 1, Ohio

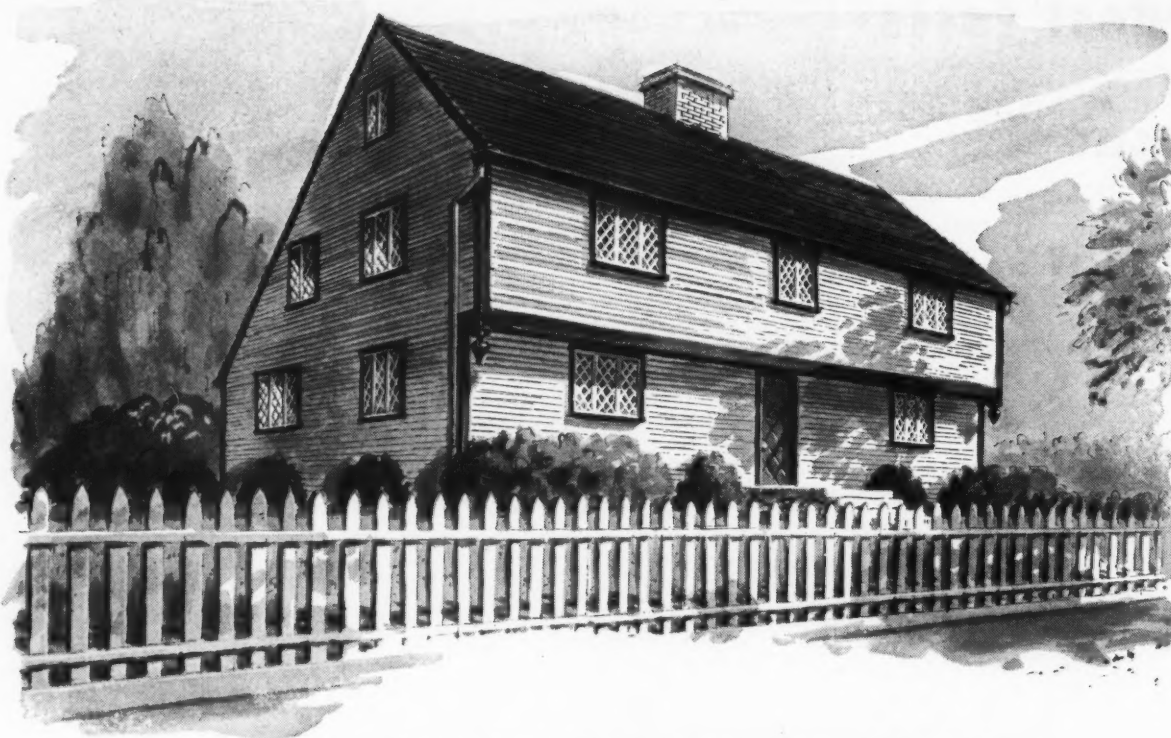
14305 Livernois Avenue • Detroit 4, Michigan



15 East 26th Street • New York 10, New York



# CLIMATE DICTATED THIS HOUSE



## Now You Can Dictate the Climate With YORK RESIDENTIAL AIR CONDITIONING

### Only YORK Gives You All 8

- **Faster Cooling!** Unique Cooling-Maze Coil cools and dehumidifies faster.
- **Better Heat-Humidity Balance!** Step-Matic Control dehumidifies without overcooling.
- **Lowest Maintenance Costs!** Completely Hermetically Sealed Refrigerating System is trouble-proof.
- **Lowest Operating Costs!** Capillary tube refrigerant feed, plus step-starting relay, reduces starting current needs.
- **Lower Installation Costs!** Adaptable to any heating system.
- **Lower Cleaning Costs!** 2 heavy filters comb dirt, dust, soot, pollen from air.
- **Quieter Operation!** Built-in compressor mufflers, cushion mountings and acoustically treated cabinet reduce operating sound to a minimum.
- **York's Five Year Protection Plan!** Your assurance of trouble-proof performance.

Now you can easily solve the problems of "hot-weather planning."

York Residential Air Conditioning—for conditioning entire homes with compact, central installations—can be your answer to heat, humidity, ventilation, circulation, dirt, dust and pollen.

There are seven York Residential Air Conditioners—for every size and type of residence. And for every kind of installation—attic, service closet, garage, basement—giving you complete freedom of design. With York you exercise freedom, too, in your choice of heating plant—because York can be adapted to any type, whether it be a forced warm air system, a gas-fired steam system, or a coal-steam or an oil-fired hot water system.

For full information on the versatile York Residential Air Conditioner . . . and how much easier it makes your task . . . call your York Representative (he's listed in the Classified Directory). Or write to York Corporation, York, Pennsylvania.



The big advances come from

# YORK

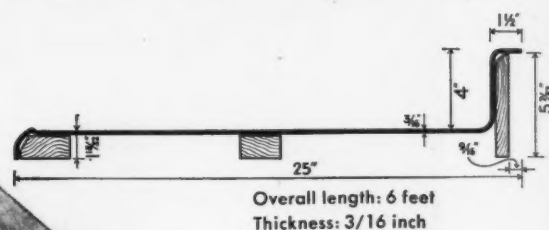
Headquarters for—Refrigeration and Air Conditioning

HAVE YOU SEEN THE NEW ONE-PIECE

# G-E Textolite<sup>\*</sup>

## MONOTOP

PLASTICS SURFACING?



HERE AT LAST is a plastics top with counter surface and backsplash molded in a single, continuous unit!

It's General Electric's new Textolite Monotop surfacing; it does away with cracks and crevices—makes metal stripping unnecessary. Like all G-E Textolite, the new unit resists heat, stains, and scratches—cleans as easily as glass.

You'll like the lip molded right into the edge to keep liquids from dripping onto cabinet fronts—you'll like the beautiful "Cross Current" pattern (exclusive with G.E.!) in five pleasing colors. For beauty that "sells" kitchens . . . for durability your clients will appreciate . . . specify G-E Textolite Monotop surfacing for sinks and counter tops. It's wonderful for bathroom vanities, too! Send coupon for free booklet.

\* Reg. U. S. Pat. Off.



### NOTHING TOPS IT!

G-E Textolite Monotop is the only top of its kind, with nothing but smooth, durable plastics from edge to edge. It can take punishment, too! Wears like iron, cleans like glass.

**FREE** →



**General Electric Company, Section 141-4A  
Chemical Division  
Pittsfield, Mass.**

Please send me free booklet and reprint of an article describing G-E Textolite Monotop installation.

Name \_\_\_\_\_

Firm \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

*You can put your confidence in—*

**GENERAL  ELECTRIC**

141-4



St. Paul's School, Grosse Pointe Farms, Michigan.  
Architect: Leinweber, Yamasaki & Hellmuth, Detroit, Mich.



## Will you take a tip from a tree?

In the shade of a tree, even on the brightest days, you can read comfortably. Light coming from all sides is equalized—no deep shadows, no glare.

You can design classrooms like a tree—as regards good lighting. That's important because authoritative studies show that much of our eye-strain is caused by *too little daylight* in school-rooms. In offices and factories, too, people can see most comfortably when they have lots of light evenly distributed throughout the room.

Daylight Walls come nearest to duplicating the daylight you find under a tree. They admit the maximum amount of light because they are made with clear flat glass, wall-to-wall, and all the way to the ceiling. Clear glass transmits more light than glass in any other form—as much as 40% more than

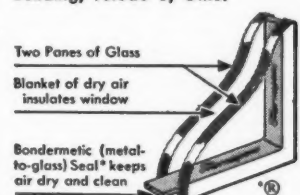
some forms of translucent but nontransparent glass.

To control light when it's too bright, flexible shading is used as in the classroom shown above. That permits reflecting bright sunlight toward the ceiling and diffusing it throughout the room.

Compare the cost of Daylight Walls with any other type, and you'll see that they enjoy the advantage of economy as well as superior lighting. Write for literature on school design.

### FOR WINDOW INSULATION

*Thermopane*\* insulating glass is widely and successfully used. *Thermopane* with 1/2" of dry air hermetically sealed between two panes has twice the insulating value of single glass. This minimizes chilliness, drafts and heat loss at windows. *Thermopane* cuts air conditioning costs by reducing the amount of heat entering during summer. Write for *Thermopane* literature. Libbey-Owens-Ford Glass Company, 4152 Nicholas Building, Toledo 3, Ohio.



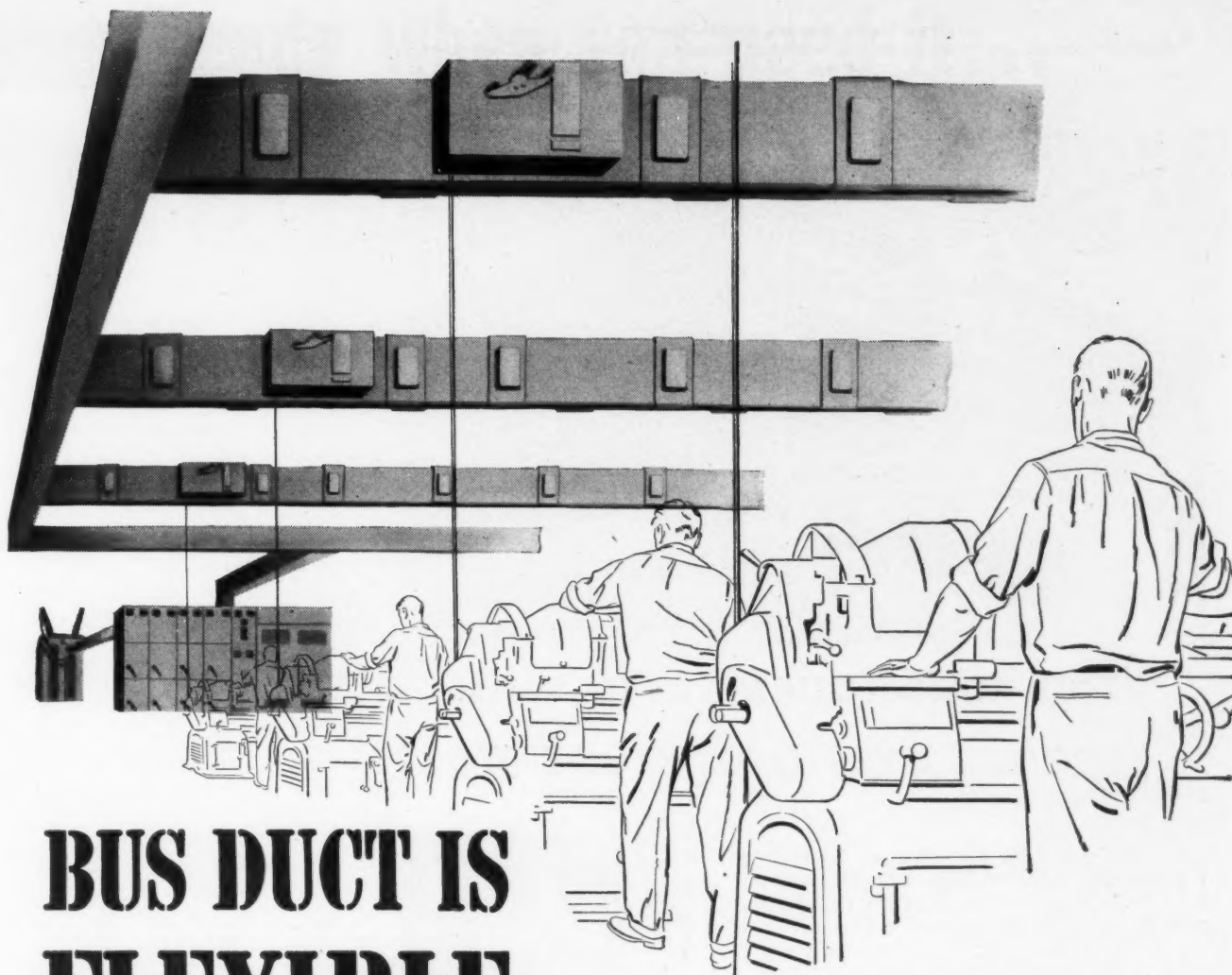
## DAYLIGHT WALLS

THAT DON'T OBSCURE VISION

THERMOPANE • PLATE GLASS • WINDOW GLASS

Other L-O-F Glass Products: Vitrolite\* Safety Glass E-Z-Eye Safety Plate Tul-flex\* Plate & Doors Fiber-Glass





# BUS DUCT IS FLEXIBLE

## from transformers to machines

Westinghouse Bus Duct can help you provide better power distribution and lick rising cost curves three ways:

First, Westinghouse Plug-in Duct distributes power more dependably to points of consumption—handles momentary overloads safely with minimum power loss, without breakdown. Prestite® insulators completely insulate plug-in stabs, eliminate hazards of accidental contact with busbars. Foot for foot Westinghouse Bus Duct delivers more power than same-rated systems of wireway or conduit.

Second, Westinghouse Bus Duct is installed quickly and easily, minimizing outage time, labor time. Completely prefabricated sections are convenient to handle and mount; cantilever hangers are easy to align.

Third, for convenience in installing or relocating machinery quickly, Westinghouse Bus Duct is

equipped with plug-in receptacles every foot—no laborious, costly cutting and splicing of cable. To relocate duct itself, simply dismantle and remount sections—minimum loss of operating time, no waste of equipment.

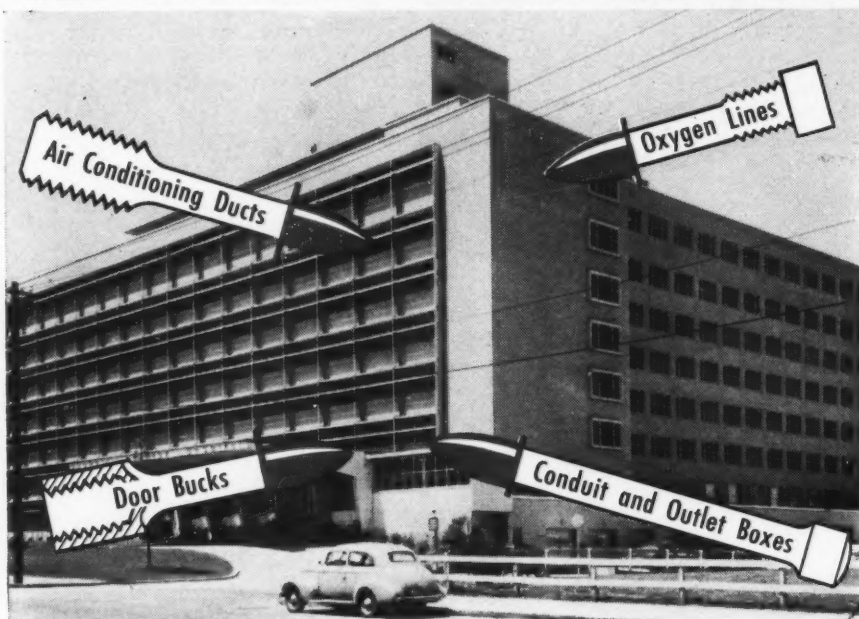
Call your Westinghouse representative for help on power distribution problems, or write for Bus Duct Manual B-4272-A, Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Penna. J-30058

YOU CAN BE SURE... IF IT'S  
**Westinghouse**

**BUS DUCT**



Georgia Baptist Hospital, Atlanta, Georgia  
 Architect—Stevens and Wilkinson, Atlanta • General Contractor—Henry C. Beck Co., Atlanta



## 2700 MAN-HOURS SAVED WITH *Ramset Fastening System*

At an estimated 50 fasteners per hour, four contractors on this building set 12,000 fasteners into steel or concrete in about 300 man-hours, with RAMSET FASTENING SYSTEM. Conventional methods would have required about 3,000 hours of tedious labor effort. Result—they saved critical man power and reduced their costs in proportion. Of equal importance, RAMSET SYSTEM enabled the work to progress far faster and aided in the more rapid completion of the building.

Contractors using RAMSET SYSTEM included:  
*Carrier Corporation*, for air conditioning.  
*Henry C. Beck Company*,  
 for doors, partitions and cubicle curtains.  
*Stephenson Company*,  
 for oxygen lines and pipe hangers.  
*Whitehead Electric Company*,  
 for electrical work.

The advantages of RAMSET SYSTEM, in time and money savings, can be gained in most buildings requiring fastening or anchoring work in steel or concrete. Your nearby RAMSET representative will gladly help you realize these economies in buildings under erection or being planned; or, write us for detailed information.

**Ramset Fasteners, Inc.**  
 12117 BEREA ROAD • CLEVELAND 11, OHIO

Product Patent No. 2470117. Other Patents pending



### Send for new Application Manual

This booklet contains detailed drawings and descriptions to help you take advantage of economies and time savings of RAMSET SYSTEM, with new, improved Tru-Set Fasteners. Send for your copy.



## Architectural Engineering

### PRODUCTS

(Continued from page 268)

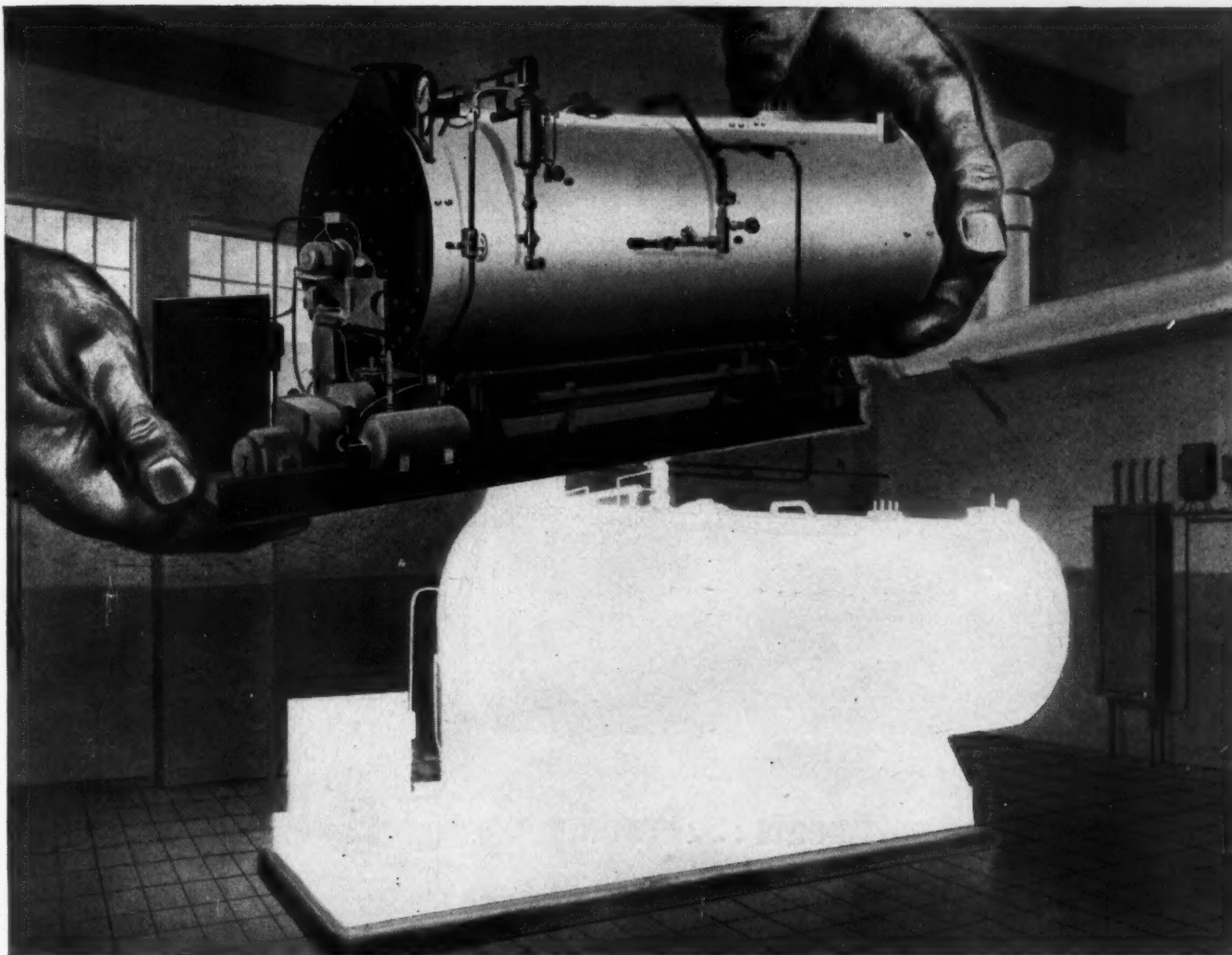
- Quick-Drying *Du Pont Sealer-Coater*, which has been field-tested for two years, is reported to make two-coat-a-day wall painting uniformly possible. The product dries under normal conditions in less than two hrs. and, according to the manufacturer, has been known to dry in as little as 20 min. For this reason, it makes it unnecessary to wait overnight for a primer coat to dry before applying the finish coat. The paint is reported to apply easily over dry wall construction, wall board, oil-type flat wall paints or enamels, resin-emulsion paints and bare plaster, although new plaster requires aging. It is also said to be free from overwhelming odor. The paint may show lap marks, the manufacturer reports, and is therefore not satisfactory for a finishing coat. However, it is said to provide a good undercoat for the usual types of top coats with the exception of the rubber-base paints. The coating is described as having excellent hiding qualities and as bridging fire cracks and other fine cracks. E. I. du Pont de Nemours & Co., Nemours Bldg., Wilmington, Delaware.

- A field-tested *Adelphi One-Coat* house and trim paint is available in 19 colors plus a self-cleansing white. Although one-coat house paints have been manufactured previously in white, the manufacturer reports that his product is the first to offer a full range of colors. The paint is said to permit home owners to complete exterior painting of most houses with a single application and to effect savings of up to 40 per cent less than two-coat applications. The product is described as having an extremely durable film which covers about 500 ft per gal., and which will not crack, chip, peel or fade. It will reportedly give perfect results on a wide range of surfaces and has been specially formulated to assure long life and an excellent repaint surface under severe climatic conditions, retaining beauty of color for years. The new paint is said to cost no more than ordinary house and trim paint. Adelphi Paint & Color Works, Inc., 86-00 Dumont Ave., Ozone Park 17, N. Y.

(Continued on page 278)



# Ready when you need it...



## Save Installation-Construction Time — Expedite Emergency Installations — Serve Immediate Temporary Steam Needs — With a Cleaver-Brooks Self-Contained Boiler

**W**HEN speed is vital, you can save weeks of valuable installation time with a Cleaver-Brooks boiler — delivered to location as a complete, factory assembled and tested, self-contained unit, with much of the trim and accessories provided.

In an emergency the installation time can be reduced to as little as 48 hours, by following a properly planned and coordinated procedure of providing in advance the required facilities — foundations, headers, service and blow-off lines, fuel tanks and lines.

Prior to the completion of your building, Cleaver-Brooks boilers can be placed in operation to serve immediate steam needs. When permanently installed the change-over takes

place with a minimum of labor and expense and the avoidance of interrupted steam service.

Cleaver-Brooks are the first and finest in modern, self-contained boilers — operate at a guaranteed efficiency of 80% — burn the fuel most available and economical in your area, gas, oil, or combination gas and oil — fully meet all codes — standard models available in sizes 15 to 500 hp; 15 to 250 psi.

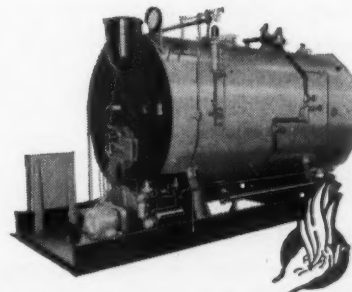
**CLEAVER-BROOKS COMPANY**  
Originators of the Self-Contained Boiler  
Dept. F-334 E. Keefe Ave., Milwaukee 12, Wis., U.S.A.  
Cable Address: Clebro-MilwaukeeWis



*Write for latest, fully illustrated and descriptive Cleaver-Brooks Steam Boiler Catalog.*

## WHY INSTALLATION TIME IS CUT:

- ✓ Simple Low-Cost Stack
- ✓ No Job-Site Brickwork — No Special Foundations
- ✓ Boiler Delivered as a Complete, Factory Assembled, Tested, Self-Contained Unit
- ✓ Centralized Responsibility — No Waiting on Multiple Sources of Supply



## Cleaver-Brooks

Builders of Equipment for the Generation and Utilization of Heat • Steam Boilers • Oil and Bitumen Tank-Car Heaters • Distillation Equipment • Oil and Gas-Fired Conversion Burners





Manhattan Apartments furnished with Fenestra Intermediate Combination and Picture Windows.

Architect: Mayer & Whittlesey and Skidmore, Owings and Merrill, N. Y.

Contractor: Cauldwell-Wingate Co., N. Y.

## Manhattan Apartments... Proudly Furnished with the Finest in Windows

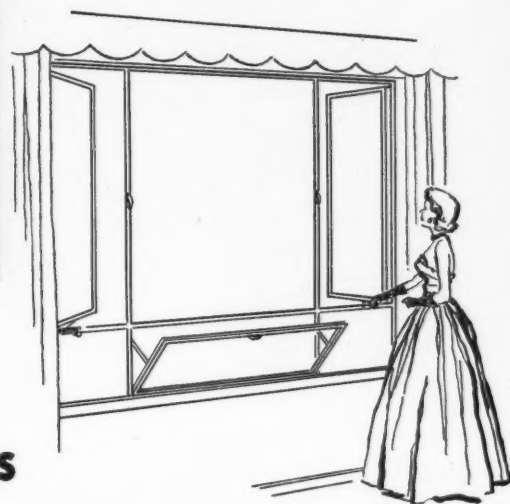
Here is the clean, flowing beauty of line that makes Fenestra\* Windows a proud part of fine furnishings.

Here are windows that act at the gentle command of a woman's hand . . . swinging out at the sides to capture a passing breeze . . . swinging in at the sill to furnish controlled ventilation, even while the rain falls. No wonder tenants like them.

Why are Fenestra Windows so exceptional?

The geared roto-adjusters, by which they operate so faultlessly, are part of the reason. And partly, it is the advanced design of the rolled steel casement sections. But mostly, it is the composite skill of the best designers and craftsmen, plus the priceless experience of America's oldest and largest steel window manufacturer.

Ask for full information from your Fenestra Representative, see Sweet's section 17 b/DET, or write to Detroit Steel Products Company, Dept. AR-5, 2252 East Grand Boulevard, Detroit 11, Michigan. \*®



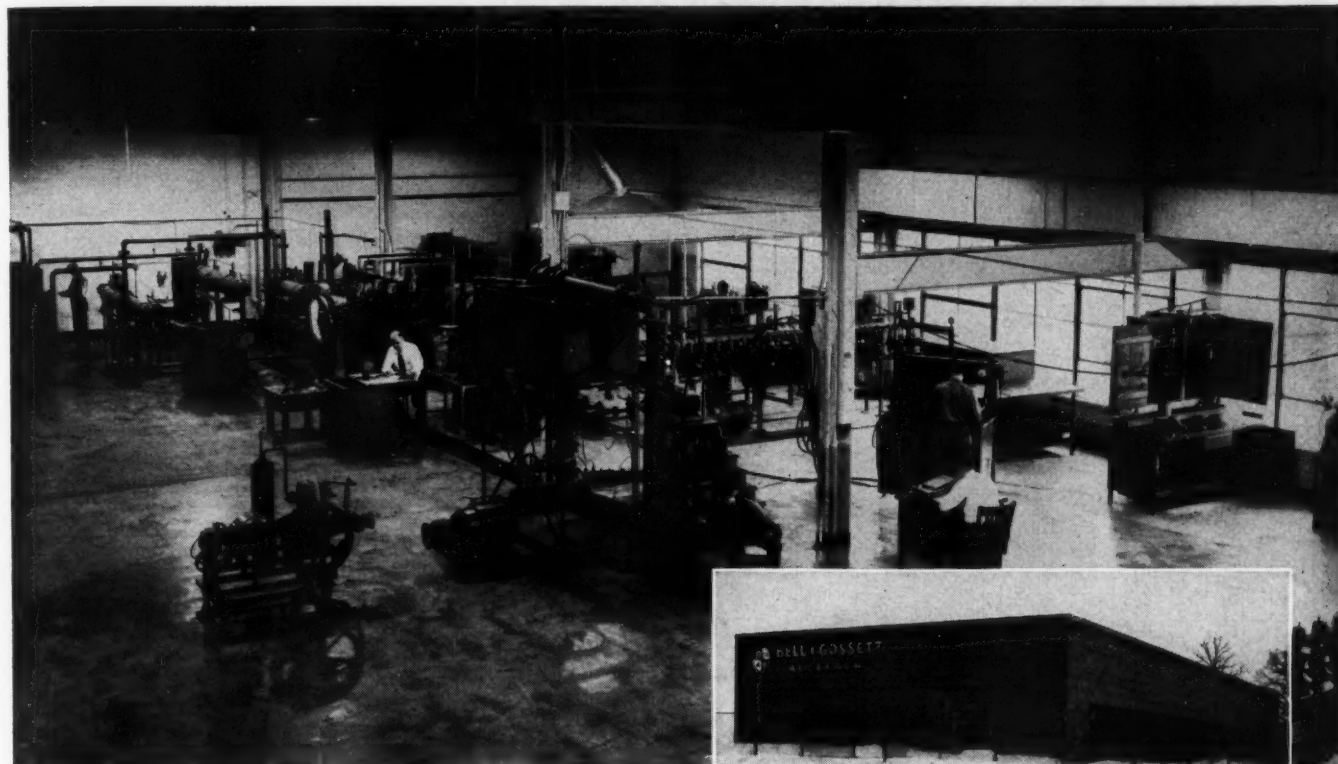
### NOW...

#### Super Galvanizing

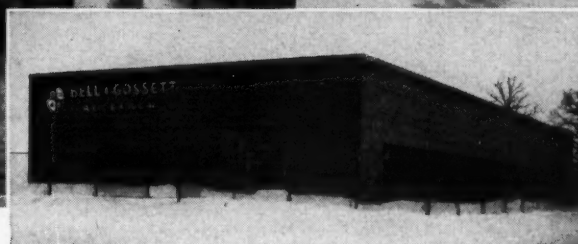
Here are windows, with the strength and rigidity which only steel can give, that don't need maintenance painting! They are now Hot-Dip Galvanized in the only plant of its kind in America. This new Fenestra plant has automatic controls, special processes—all designed specifically to Hot-Dip Galvanize Fenestra Steel Windows. Write for your book on Fenestra Hot-Dip Galvanized Windows.

FIRST WITH THE FINEST IN WINDOWS... *Fenestra*

# WHERE *Research* WORKS FOR YOU



*A section of the B & G Laboratory showing equipment under test.*



*The B & G Research Laboratory at Morton Grove, Illinois.*



**B & G  
WATER  
HEATER**



**B & G  
MONOFLO  
FITTING**



**B & G  
RELIEF  
VALVE**



**B & G  
FLO-CONTROL  
VALVE**

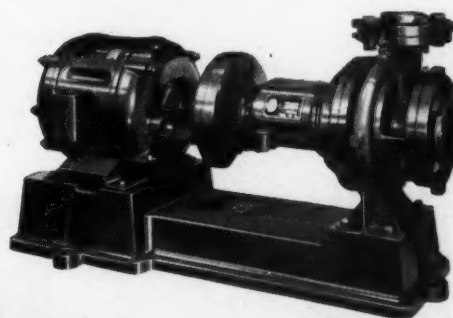


**B & G BOOSTER**

● In this building, a continuous program of research and experimentation is devoted to the interests of better heating.

Complete modern facilities are available for extensive product development and the exploration of new ideas. Laboratory technicians, working in conjunction with the engineering staff analyze problems and needs reported from the field and work out practical solutions. Test equipment permits duplication of actual operating conditions.

This never-ending effort to improve both product and methods of application is the reason you can specify B & G Hydro-Flo Heating Equipment with full confidence in its quality and dependability.



**B & G  
UNIVERSAL  
PUMP**

## **B & G Hydro-Flo PRODUCTS**

A complete line of forced hot water heating system equipment for residential, commercial and industrial application. Look for the B & G emblem—it is your warranty of satisfaction.

\*Reg. U. S. Pat. Off.



# BELL & GOSSETT

C O M P A N Y

Dept. CM-32, Morton Grove, Illinois

Canadian Licensee: S. A. Armstrong Ltd., 1400 O'Connor Drive, Toronto, Canada

# FOR INCREASED SALES PUT THINGS IN THE BEST LIGHT with **AMPLEX SWIVELITES**



## OTHER AMPLEX "BEST BUYS"



Colorbeam  
Reflector Lamps



Outdoor  
Weatherproof Lamps



"Hi-Hat" Recessed  
Fixtures



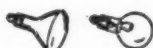
Reflector  
Spots and Floods



Hi-Bay Reflector Lamps



Street Lighting and  
Traffic Signal Lamps



Industrial Infra-Red  
Lamps

Modern accent lighting with Amplex Swivelites has brought Famous-Barr Department Store, St. Louis, Mo., top display efficiency and permanent cost savings.

IN HUNDREDS OF STORES, installation of accent lighting with Amplex Swivelites has focused new attention on merchandise . . . helped bring more sales! There's nothing like Swivelites for efficiency and economy. They're smartest designed, and made of aluminum with a permanent satin finish.

Special air-flow ventilation prolongs bulb life. Their unique double-ball swivel gives positive, finger-tip positioning. And all the basic units of Amplex Swivelites are completely interchangeable with each other. Setting up new lighting effects is quick, easy and inexpensive.

For the best investment you can make in accent lighting, get the full Amplex Swivelite story. Write Amplex Corporation, Dept. D-5, 111 Water St., Brooklyn 1, N. Y.

# AMPLEX

Sealed-Beam Reflector Lamps, Colorbeam Lamps, Spoilites and Floodlights, Industrial Infra-Red Heat Lamps, Vibration and Rough Service Lamps, Street Lighting Lamps, Traffic Signal Lamps, Incandescent Lamps, Fluorescent Tubes, Display Accessories.

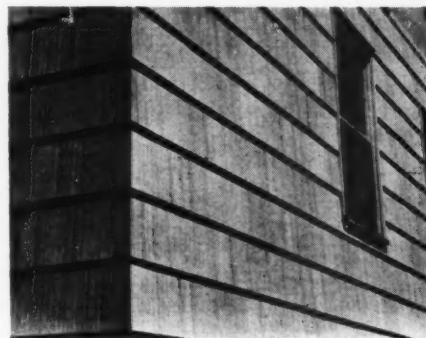
## Architectural Engineering

### PRODUCTS

(Continued from page 274)

#### Asphalt Coursing Strip

Designed to enhance the appearance of asbestos-cement siding while at the same time providing added insulating value, *Shadowedge* is a new tapered asphalt double coursing strip. The strip is 12 by 36 in., approximately  $\frac{1}{16}$  in. thick at the head and  $\frac{1}{16}$  at the butt end. This tapered shape thrusts the lower edge of the siding shingle forward, creating a deep-shadow appearance for a



Tapered asphalt coursing strip enhances appearance of shingled sidewalls

sidewall. The strip may be applied over any type of board lumber, plywood, gypsum, fiber board or other form of sheathing material. While it is designed for use with asbestos-cement siding, it may be used with any other type of shingled or lapped siding. Ruberoid Co., 500 Fifth Ave., New York, 18, N. Y.

#### Functional Furniture Group

Described as featuring straight, clean lines and direct handling of materials, a new furniture group designed by Allan Gould is now being marketed. Comprising a coordinated group of wood, metal and upholstered pieces, the collection includes a full range from dining, seating, and storage pieces to occasional furniture. Among the various units are two leather and metal chairs that were included in the recent Museum of Modern Art Good Design exhibit.

Storage pieces are designed around an integral frame and leg construction. Sides

(Continued on page 282)



# The simplicity of dry wall construction with up to 3 times the fire resistance!




*Precision Housing Corp., Parma Heights, Ohio; Architect—Don Kromer*

That's FIRESTOP Bestwall—the revolutionary wallboard with a fire rating of up to 1 hour in single-layer application for both walls and ceilings.

Remarkable fire rating is just one reason why new FIRESTOP is already being used extensively for walls and ceilings in housing developments and custom homes throughout America. The  $\frac{3}{8}$ " FIRESTOP, for instance, besides offering 1 hour's fire resistance, has greater strength and sound resistance, gives better all-around performance, than ordinary gypsum wallboards. The  $\frac{1}{2}$ " FIRESTOP offers 45 minutes' fire resistance and the  $\frac{3}{8}$ " 30 minutes'.

Investigate this amazing product. Write for the booklet "Facts about FIRESTOP" today. It contains data and detailed application specifications of this remarkable Certain-teed development.

FIRESTOP Bestwall is the one and only wallboard carrying the mark of Underwriters Laboratories  Re-examination Service.

## ***Certain-teed***

REG. U. S. PAT. OFF.

*Quality made Certain... Satisfaction Guaranteed*

**CERTAIN-TEED PRODUCTS CORPORATION**

ARDMORE, PENNSYLVANIA



*Certain-teed*  
BUILDING  
PRODUCTS

ASPHALT ROOFING • SHINGLES • SIDINGS  
PORTLAND CEMENT ROOFING AND SIDING  
HYDRATED PLASTER • LATH • WALLBOARD • ROOF INSULATION  
FIBERGLASS INSULATION

# An **ART METAL** Original Design in INCANDESCENT LIGHTING

**ADVANCED  
DESIGN**

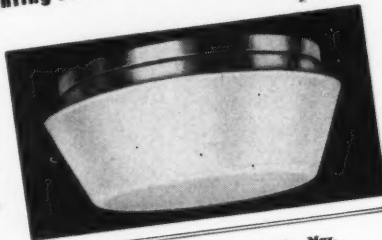
**ART METAL**

**TAPERED OPAL GLASS BAND UNITS**  
A New Circular Lighting Form

**NEW  
PRODUCT  
RELEASE**

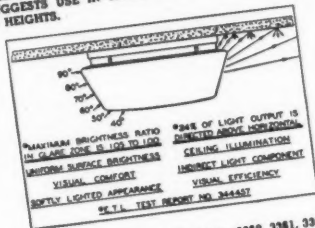
A.L.A. FILE 3152

- A NEW CONCEPT OF LIGHTING DESIGN IN CLOSE TO THE CEILING BAND UNITS.
- OVERSIZED GLASS WITH TAPERED SIDES PROVIDES UNIFORM SURFACE BRIGHTNESS FOR VISUAL EFFICIENCY AND COMFORT (NO HOT SPOTS).
- MAXIMUM BRIGHTNESS RATIO IN THE NORMAL VIEWING ZONE IS 1.05 TO 1.00.
- THE COMBINATION OF GLASS CONTOUR AND FIXTURE DESIGN PROVIDES LIGHT TO THE CEILING.
- CEILING CONTRAST IS RELIEVED FOR CHEERFUL AND PLEASING APPEARANCE.
- CONSTRUCTION PERMITS USE OF HIGH WATTAGE.
- FOUR NEW SIZES OF GLASSWARE.
- FIXTURES MAY BE SPACED 1.5 TIMES THE MOUNTING HEIGHT ABOVE WORK PLANE FOR UNIFORM ILLUMINATION.
- THE SHALLOW DEPTH AND WIDESPREAD LIGHT DISTRIBUTION SUGGESTS USE IN AREAS HAVING LOW TO MEDIUM CEILING HEIGHTS.



Cat. No.	GLASS SIZE		Band Dia.	Depth O. A.	Max. Watts
	Top	Bottom			
3360	9 1/4"	8 1/4"	4 1/4"	4 1/4"	2-60W
3361	11 1/4"	10 1/4"	4 1/4"	5 1/4"	2-75W
3362	13 1/4"	12 1/4"	4 1/4"	6 1/4"	2-100W
3363	15 1/4"	14 1/4"	4 1/4"	8 1/4"	3-100W

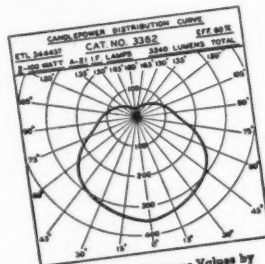
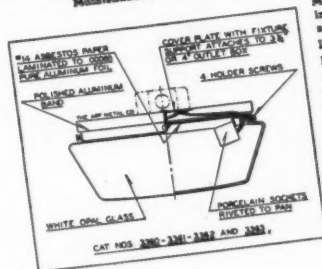
FINISH: Polished Aluminum.



Coefficients of Utilization Table for Cat. Nos. 3360, 3361, 3362 and 3363

Ceiling	COEFFICIENTS OF UTILIZATION			
	75%	50%	25%	10%
Walls	1.00	1.00	1.00	1.00
Room Index				
1	.20	.17	.19	.16
2	.25	.22	.24	.21
3	.28	.25	.27	.24
4	.31	.28	.29	.26
5	.34	.30	.31	.28
6	.37	.33	.34	.30
7	.40	.36	.37	.33
8	.43	.39	.41	.36
9	.45	.41	.43	.38
10	.47	.43	.45	.40

Maintenance Factors—.85 Clean, .75 Average



Multiply Candlepower Values by  
.52 for Cat. No. 3360  
.71 for Cat. No. 3361  
1.5 for Cat. No. 3363

## SPECIFICATIONS

Made of Aluminum—higher coefficient of heat transmission of aluminum pan increases rate of heat transfer to outside air to minimize temperature rise on supply conductors in outlet box and at contact of pan with ceiling.  
Lamps are horizontal.  
Four holder screws support the glass and are concealed by the glass.  
Asbestos heat baffle on under side of pan insulates adjacent metal and glass to minimize conduction of heat to pan.  
Specular aluminum foil laminated to asbestos baffle reflects light downward and reflects heat away from pan to increase proportion of heat dissipated downward and outward through the glass.  
Porcelain sockets are riveted to pan and have 12" No. 18AF wire leads.  
Special outlet box cover plate with fixture support attaches to 3/4" or 4" outlet box and retards convection of hot air upward through outlet box to minimize temperature rise on supply conductors.  
FINISH: Polished Aluminum.  
Approved, listed and labeled in accordance with the Underwriters' Laboratories, Inc. standard dated 1-1-51 for ceiling-pan-type fixtures.

**WRITE**  
for this and  
subsequent releases  
on the new  
**PRODUCT IDEAS** of  
**ART METAL**  
Engineered for appli-  
cation performance

THE ART METAL CO.  
CLEVELAND 3, OHIO

**THE ART METAL COMPANY**  
CLEVELAND 3, OHIO

Manufacturers of Engineered Incandescent Lighting

**METAL DOORS AND FRAMES**  
by **AETNA**

**FORT HAMILTON  
VETERANS HOSPITAL  
Brooklyn N.Y.**

Architects  
Skidmore, Owings and Merrill

**AETNA**  
STEEL  
PRODUCTS  
CORPORATION

When you specify Aetna doors and frames,  
you assure yourself of  
dependable, large-quantity supply made  
available for prompt delivery,  
plus skilfully-engineered Aetna standard  
high quality — backed by 50 years  
of pioneering in the building supply field.

**AETNA STEEL PRODUCTS CORPORATION**  
730 FIFTH AVENUE, NEW YORK 19, NEW YORK

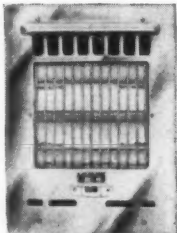
MANUFACTURERS OF STANDARDIZED STEEL DOORS AND FRAMES FOR HOUSING UNITS.  
FABRICATORS OF QUALITY HOLLOW METAL PRODUCTS FOR SCHOOLS, HOSPITALS, OFFICE BUILDINGS, ETC.



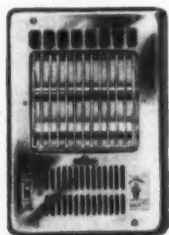


## HOW TO PICK THE RIGHT HEETAIRE

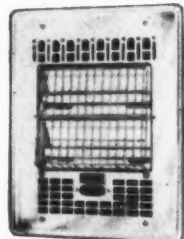
for every room  
You Build or Modernize



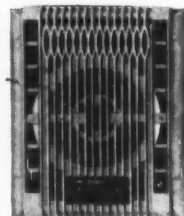
Series 200 HEETAIRE  
1000 to 2000 watts



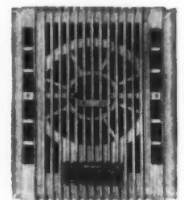
Series 230 HEETAIRE  
1250 to 3000 watts



Series 240 HEETAIRE  
1000 to 1500 watts



Series 210 HEETAIRE  
3800 to 5000 watts



Series 250 HEETAIRE  
1500 to 3000 watts

The **FOUR FACTORS** to be considered in choosing specific HEETAIREs for specific jobs are:

1. Size of Room
2. Exposure of Room
3. Use of Room
4. Climate

These four factors — size, exposure, use and climate — are the keys for selecting the specific HEETAIREs and temperatures necessary to heat any room.

In general, wattages per cubic foot determine the size of HEETAIRE recommended — but these wattages vary according to heat loss in the room (wall, window and door exposures) and according to the outside temperatures (e.g., more wattages per cubic foot are necessary in New York State than in Tennessee). In addition, the use of room to be heated determines the temperature desired and the type of HEETAIRE recommended — radiant (infra-red) heat, or heated air. Radiant heat is recommended for rooms where the primary objects to be heated are people (Series 200, 230, 240); heated air is recommended where general temperature levels are to be maintained (Series 210, 250).

Series 210 and 250 HEETAIREs are recommended for both supplementary and general heating.

**FREE!** Write for the copyrighted "A Guide to Quick Heating".



Tested and listed under reexamination service by Underwriters' Laboratories, Inc.  
Thermostatic or Manual Control . . . Radiant Heat, Heated Air and Fan-Forced Radiant Heat . . . Wall Inserts and Wall Attachables.

**MARKEL**  
ELECTRIC PRODUCTS, INC.

**LA SALLE**  
PRODUCTS, INC.

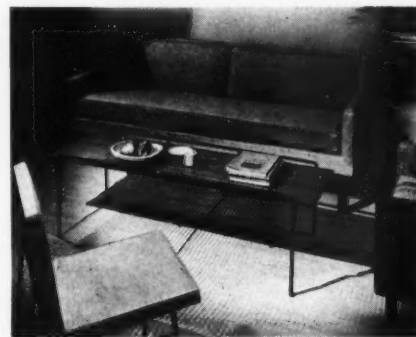
157 SENECA STREET • BUFFALO 3, NEW YORK

## Architectural Engineering

### PRODUCTS

(Continued from page 278)

and tops of these pieces are covered with a new vinyl-coated linen which will not mar or scratch and which is alcohol proof and stain resistant. The treated linen provides a handsome contrast to walnut or maple drawers and doors. Other



Sofa, chair and coffee table form part of new group, feature simple lines

pieces include extension dining tables, matching side chairs which have suspended seats and backs, a sofa, club chair, molded wood chairs, day bed, "book trough" end or side table and coffee table. Additional designs for desks and bookcases are in progress to complete the collection. Allan Gould Designs, Inc., 166 Lexington Ave., New York, N. Y.

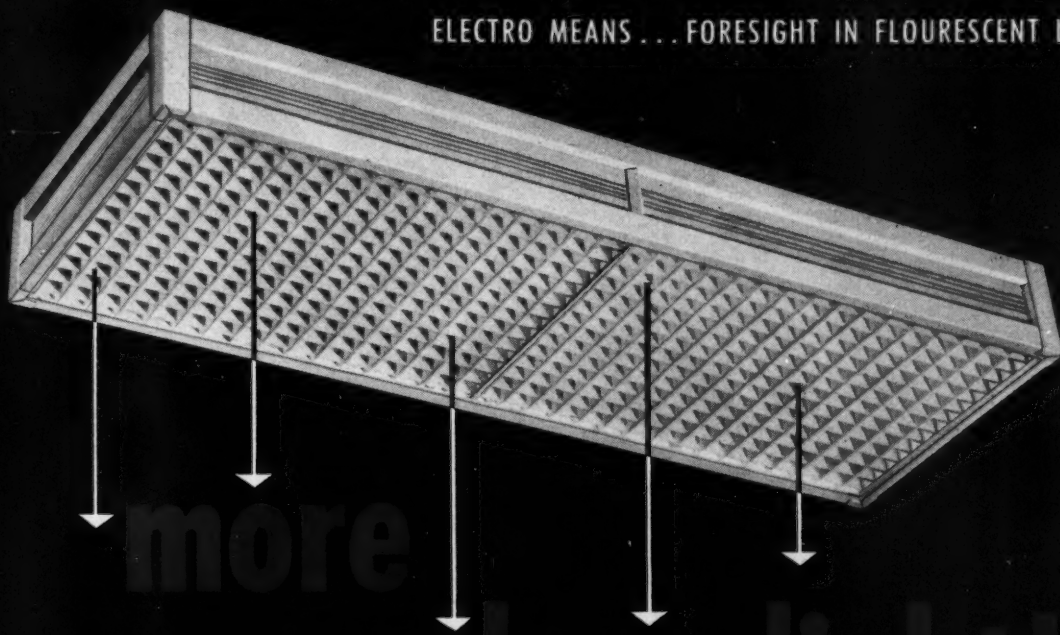
### Small-Size Booster Pumps

A line of booster pumps especially designed to meet the need for compact, space-saving units in residential and industrial hot water heating systems has been developed by Bell and Gossett. The line is comprised of three different boosters, each powered by a small 1/12 hp motor.

Despite the reduced size, the lighter units are reported to deliver a greater number of gals. per min. at lower cost in electric power than some predecessors. The smaller size units are also said to help effect savings of critical materials. Bell & Gossett Co., Morton Grove, Ill.

(Continued on page 286)

ELECTRO MEANS... FORESIGHT IN FLOURESCENT LIGHT



more  
downlight!

### New! Exclusive "Spring-a-matic" Louver Action

**Another ELECTRO advancement!**  
The easiest, safest, fastest device for opening and closing louvers ever developed. Two hidden springs hold "Surf-A-Lite" louver firmly in place. No screws, bolts or other mechanical gadgets to work loose, drop out or get out of order.



**JUST PRESS**—and louver opens for clean- or relamping

**LIFT**—and entire louver comes right out

**SLIGHT PRESSURE UP-WARDS**—and springs lock louver into position firmly and securely.

### New ELECTRO "Surf-A-Lite" with Styrene louvers

Now—the smart, neat appearance of a surface mounted fluorescent fixture—and greater lighting efficiency as well! The new, shallow "Surf-A-Lite" incorporates ELECTRO'S improved plastic louvers and a metal reflector plate to utilize more downlight... achieve better general diffusion... give increased lighting efficiency overall.

Wherever specifications indicate the desirability of a flush mounted fluorescent luminaire, select the more attractive appearance and superior lighting ability of the new ELECTRO "Surf-A-Lite".

- Lustrex styrene plastic louvers are guaranteed not to warp or discolor under normal use for the life of the fixture.
- The "Surf-A-Lite" can be used for pendant mounting as well as surface mounting by easy removal of reflector plates.
- "Surf-A-Lite" hugs the ceiling for that recessed "look"... helps end "ceiling clutter".
- No visible screws, hinges or other metal devices.
- Side Panels available in metal or in translucent Lustrex styrene plastic.
- Improved 45°—37° Shielding.
- For individual or continuous mounting.
- In 4 lamp and 2 lamp, 40 and 20 watt models.
- Also in 4-6-8 ft. SLIMLINE.

AVAILABLE THROUGH LEADING ELECTRICAL WHOLESALERS EVERYWHERE



**ELECTRO MANUFACTURING CORPORATION**

2000 W. FULTON ST. • CHICAGO 12, ILLINOIS

"You bet! Length has  
advantages - lots of them!"

Consoweld is the only decorative plastic surfacing available in 16-foot panels. And that's a big advantage when you want beauty and durability on *any* long surface. With 16-foot lengths, there are fewer seams. Color and pattern matching is simplified.

Consoweld is also available in standard panel sizes and in a wide range of beautiful patterns, wood grains and solid colors.

Time-tested in all types of installations—residential, commercial, industrial and institutional—Consoweld is moisture and alcohol-proof, burn resistant and practically indestructible through ordinary wear.

It meets or exceeds NEMA standards for laminated thermosetting decorative sheets.

Write for color samples and name of your nearest distributor. See Sweet's Architectural File, <sup>14</sup>/<sub>66</sub>, for details and specifications.



# CONSOWELD

plastic surfacing . . . *good for a colorful lifetime*

CONSOLIDATED WATER POWER AND PAPER COMPANY, WISCONSIN RAPIDS, WISCONSIN  
MAKERS OF CONSOWELD INDUSTRIAL LAMINATES AND IMPREGNATED PAPERS



**A LEADING SPECIFICATION**

SINCE 1907



*Blue White*

NOT PINK — NOT YELLOW

STUCCO

TERRAZZO

CAST STONE

CONCRETE SLAB

PLAIN OR

**MEDUSA WHITE PORTLAND CEMENT**

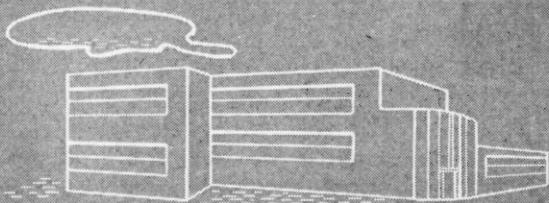
WATERPROOFED

WHITE CONCRETE

CONCRETE TILE

MORTAR

SCULPTURING



THE ORIGINAL *White*  
PORTLAND CEMENT

*Never surpassed in white color  
or in quality*

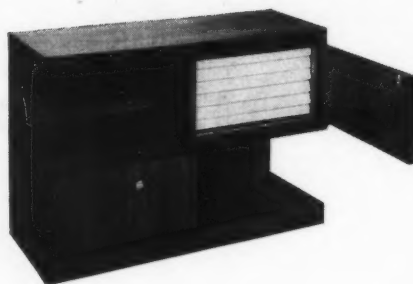
**MEDUSA PORTLAND CEMENT CO.**  
1000 Midland Building • Cleveland 15, Ohio

# PRODUCTS

(Continued from page 282)

## Furniture Units

Featured among new furniture designs by Phillip Enfield is a group of flexible shelf units which may be arranged to suit a variety of requirements. The units have cantilevered shelves with no vertical supports and achieve a free, floating appearance. They are



Louvered drawer compartments fit into cantilevered shelf unit where desired

42 in. long, 16 in. wide and 29 in. high. When the ends are cut 45 deg, the units can be placed at right angles to each other. Compartments designed to fit into the units are also available and include a louvered three-drawer section and an adjustable shelf compartment, both furnished with or without doors. Among suggested uses for the pieces are: sideboard with sliding compartments of shelf and drawer units for storage; bookcases and storage compartments for den or bedroom; and sectional wall units with built-in radio-phonos; record cabi-



FUNCTIONAL  
*Beauty*

## PARTITIONS & SCREENS of PENNSYLVANIA CORRUGATED GLASS *Without Wire*

Also Manufacturers of Original CORRUGATED Wire Glass (with wire netting encased). Use coupon below to check off the catalog for your needs.



Interior design achieves striking functional styling with light-diffusing partitions and screens of Pennsylvania CORRUGATED GLASS without wire. For home and institutional decor, sparkling, easy-to-clean CORRUGATED GLASS provides, with amazing economy, divisional effects of simple, pleasing and utilitarian design. Commercial uses are varied—from reception and office partitions to back-bars, counter fronts and illuminated fountain centers. There is no end to the flexible design of CORRUGATED GLASS and its advantages for inviting more and better business. There is no better way to let in light without sight. You specify minimum maintenance, easy installation, and lifetime beauty when you include CORRUGATED GLASS without wire for redecoration, and new room planning.



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Please send me the following FREE illustrated catalogs:  
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☐ PARTITIONS and SCREENS CATALOG  
☐ BROCHURE ON FACILITIES FOR GLASS AND METAL WORKING FOR DEFENSE PRODUCTION  
☐ PENGLASS VENTILATOR CATALOG

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_



Sliding legs permit double leaf table to be extended up to 65 in.

nets, and sheet music storage for living room.

Another new design by Enfield is a sliding leg extension table, handy for extra serving space. The table is 15 in. wide and 19 in. high. When closed, its length is 30 in., and with both leaves extended it is 65 in. long. Phillip Enfield Designs, 50 W. 53rd St., New York, N. Y.

## Protecting Insulation From Mechanical Damage

A method of preventing damage to insulating material subjected to repeated mechanical abuse has been recommended by the Magnesite Insulation Manufacturer's Association. Wherever it is impossible to prevent battering of insulated surfaces because of layout of lines or equipment, the Association advises that protection can be afforded through use of a sheet metal jacket covering the entire area of possible damage. The jacket may be tack-welded or held in place with screws or bolts. Where required, expansion joints with spring-loaded bolts may be provided in the jacket to compensate for circumferential expansion. Longitudinal expansion can be provided by lap seams at intervals of approximately 12 ft. Magnesite Insulation Manufacturers Association, 1317 F. St., N. W., Washington 4, D. C.

(Continued on page 292)



# Put your houses years in front with the greatest new heating of all



Ceiling radiant heating coils of Bundyweld® Tubing are quickly, economically installed, then plastered over to form invisible source of gentle, even radiant heat.



Absence of radiators and registers in room with Bundyweld ceiling radiant heating permits furniture arrangement that suits you best. Gone, too, are usual wall streaks and heavy dust deposits on furnishings.



Warm floors are a feature of the house with Bundyweld ceiling radiant heating. Its radiant rays, like the sun's radiant rays, are directed downward.



Bundyweld is the only tubing double-walled from a single strip. It's steel tubing, copper-coated inside and out. Leakproof, takes high pressures, transmits heat quickly.



Bundyweld ceiling radiant heating will put your houses years ahead in sales appeal.

It's low in cost—often no more than forced-air heating and frequently less. It's easy to install, simple in operation, trouble-free.

Bundyweld ceiling radiant heating is one of the most talked-about house features today. Thousands upon thousands of prospective home owners are clipping coupons from ads like the one at left and sending them in to get information.

## Amazing warmth, cleanness, savings— yours with Bundyweld ceiling radiant heating

Going to remodel, build, or buy? Look into the exciting advantages of Bundyweld ceiling radiant heating right now. It's the most comfortable, most economical, cleanest heating of all, growing by leaps and bounds in today's housing.

Here is heating that truly radiates swiftly downward from the ceiling, gently warming all the room, with even temperatures from floor to ceiling. Here's heating so natural, fresh, and invigorating it's like having the sun in your ceiling.

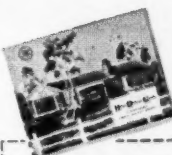
### Clean, economical, too

Draft-free Bundyweld ceiling radiant heating won't spread heavy dust layers over curtains, draperies, fur-

niture. It won't cause hazy films on mirrors, dishes, and glassware. It shortens daily housekeeping chores. Too, Bundyweld ceiling radiant heating eliminates space-eating, wall-streaking radiators and registers; postpones wall washing and redecorating for years.

Bundyweld ceiling radiant heating costs little if any more to install than forced hot-air heat. In addition to reasonable first cost, it gives you continuing yearly home-maintenance economies and fuel savings that make it your lowest-cost heating of all in the long run. Most important, of course, the heating comfort is priceless. Get the full story. Send for free brochure at right.

Get the full story before you decide on any heating system. Send for free brochure.



Fascinating, beautiful 20-page brochure gives you complete story of Bundyweld ceiling radiant heating. It takes you behind scenes, explains radiant heating clearly. Gives full story of tremendous advantages, answers dozens of questions, reports views and experiences of people who live with Bundyweld ceiling radiant heating. Send for your copy now.

Radiant Heating Division, Dept. B-5  
Bundy Tubing Company  
Detroit 14, Michigan

Send me free 20-page "Home Owner's Guide to Bundyweld Ceiling Radiant Heating."

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

### BUNDY TUBING COMPANY

Detroit 14, Michigan

© B.T.C.

WORLD'S LARGEST PRODUCER OF SMALL-DIAMETER TUBING



Home owners who live with it want nothing to do with any other heating. The architects and builders who work with it know they have a good thing that's growing bigger every day.

Get the full story on the heating of today and tomorrow. Mail coupon today.

Radiant Heating Division  
BUNDY TUBING COMPANY  
Detroit 14, Michigan

↑ Many of your prospects, among hundreds of thousands of other future home owners, have had their eyes opened by this Bundyweld ceiling radiant heating ad. It's the second in a 4-color, year-round series bringing news of today's fastest-growing, most advanced heating method to the readers of *Better Homes & Gardens* and *American Home*.

### SEND FOR FREE LITERATURE!

Send for Bundy's free 20-page brochure that explains Bundyweld ceiling radiant heating fully and clearly, gives views of people who live with it—including a heating engineer and a plumbing and heating contractor who work with it every day.

Radiant Heating Division, Dept. AR 552  
Bundy Tubing Company, Detroit 14, Michigan

- ☐ Send me free 20-page consumer brochure on Bundyweld ceiling radiant heating.
- ☐ I would also like Bundy technical radiant heating bulletin.

Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



**both jobs**

**done better**



## with MASONITE PRESWOOD



In this setting you see Masonite Leatherwood, Tempered Preswood® and Standard Preswood. Notice the gentle curves, the rounded corners. You can create all kinds of unusual effects with these dense, rigid panels.

Efficient merchandising demands: (1) an inviting background that's in tune with the character of the store, and (2) the proper display and storage equipment to bring customer and merchandise together.

Fortunately, there's a group of versatile materials that help you do both jobs well . . . give you the flexibility of expression that attracts new commissions. Masonite Preswood hardboards are strong, durable, grainless all-wood panels that work fast, go up quickly and finish beautifully.

We've prepared an interesting booklet to give you the whys and wherefores of these wonder-working materials (sold by building materials dealers everywhere). Write for your free copy of "Masonite Hardboards in Architectural Design and Construction."

**better hardboards for better buildings**



**MASONITE®**  
**CORPORATION**

Dept. AR-5, Box 777, Chicago 90, Illinois

"Masonite" signifies that Masonite Corporation is the source of the product

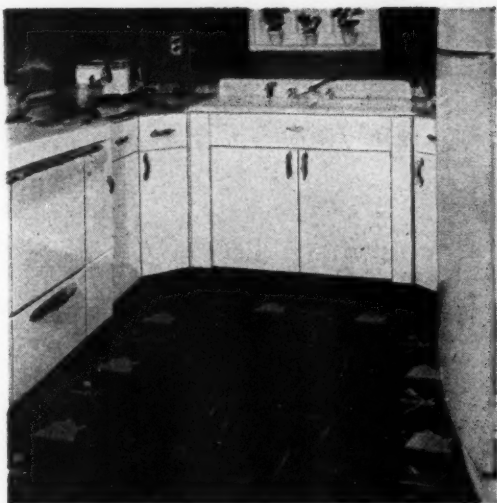
# Johns-Manville **TERRAFLEX**

the vinyl plastic-asbestos floor tile,  
offers advantages never before  
combined in one type of flooring



#### COLORS ARE CLEARER

The vivid colors of Johns-Manville Terraflex Flooring have a clarity and warmth that add beauty to any interior—keep their *first day newness* for a lifetime. The wide range of marbled colors in harmonious and contrasting shades offers unlimited freedom of design.



#### EASIER TO MAINTAIN

Terraflex is resistant to grease and oil, alkaline moisture and mild acid solutions. It is easy to clean and even caustic soaps which permanently damage other types of resilient floorings will not affect Terraflex—it cannot “wash out.” Many different decorative inserts are available to add interest and individuality to floor design. Knife-fork and teakettle inserts are shown above. Moisture-resistant, Terraflex is ideal for laying over radiant-heated concrete floors in direct contact with the ground.



#### WILL LAST A LIFETIME

Although Terraflex is extremely resilient, it will outwear other types of decorative floor coverings two to one. With its superior flexibility it conforms to uneven surfaces and absorbs normal floor play. It does not crack, curl, become loose, or brittle, or shrink around the edges. It does not become fuzzy or scratch or lose its sheen from constant wear.

FOR THE BEST there is in flooring—look to Johns-Manville Terraflex.

Send for a free brochure showing the full color line of Johns-Manville Terraflex and Asphalt Tile. Write Johns-Manville, Box 290, New York 16, N. Y.



## Johns-Manville

TERRAFLEX AND ASPHALT TILE FLOORING

# MORE POWER for your dollar!



# 15

## different Circulators

TWO TYPES • HORIZONTAL OR VERTICAL

EACH **DESIGNED** FOR ITS RATED CAPACITY

LARGER MOTORS • HEAVIER CONSTRUCTION

COMPARE capacities and motor horse power as well as size when you choose Circulators and you'll choose Thrush. Here is a complete line of horizontal or vertical Water Circulators to fit every heating job. They offer more for your circulator dollar because they're built better . . . even the smallest sizes are rugged in construction and have larger motors with greater actual output than other makes of equal rating. That means less trouble on the job . . . fewer service calls and greater customer satisfaction. Patented coupling eliminates vibration. Lubrication is sealed in. See our catalog in Sweet's or write Dept. J-5.

H. A. THRUSH & COMPANY • PERU, INDIANA

# THRUSH

$\frac{3}{4}$ " • 1" • 1 $\frac{1}{4}$ " • 1 $\frac{1}{2}$ "  
1/6 HORSEPOWER

2" • 2 $\frac{1}{2}$ " • 3"  
1/4 HORSEPOWER

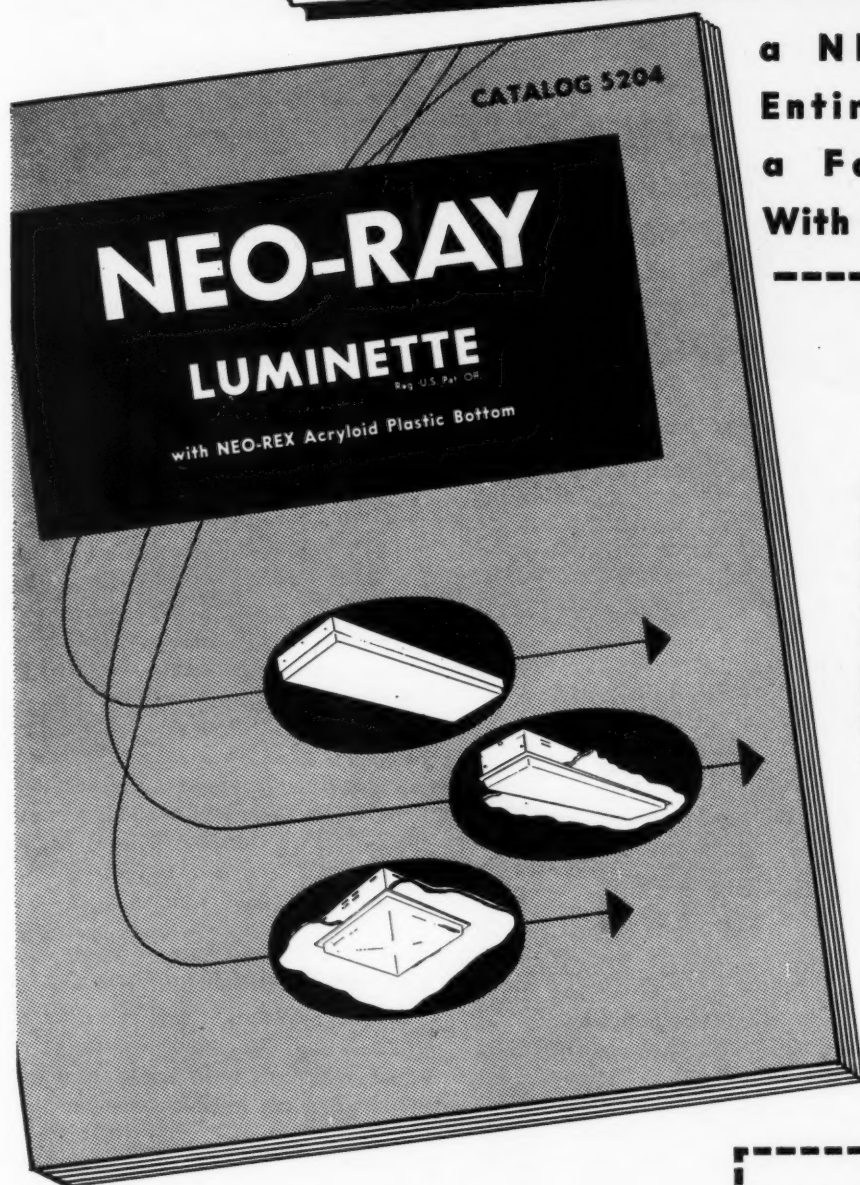
## water circulators



...NOW READY

FOR EVERYONE WHO SPECIFIES

LIGHTING FIXTURES...



a NEW catalog for an  
Entirely NEW Addition to  
a Famous Line Loaded  
With NEW Patented Features

If you specify lighting—you can't afford to be without this latest NEO-RAY LUMINETTE catalog. You'll see a variety of fixtures, Fluorescent and Slimline in various sizes, featuring the famous Neo-Rex Acryloid shield . . . together with pictures, cross-sections, ETL Reports, and lighting data. Before writing another lighting fixture specification be sure to see this catalog.

See our other lines in Sweet's  
Architectural File for 1952  
sec. 31a  
NE

## NEO-RAY PRODUCTS, INC.

Manufacturers of

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Please rush a copy of your newest NEO-RAY LUMINETTE  
Catalog 5204 to:

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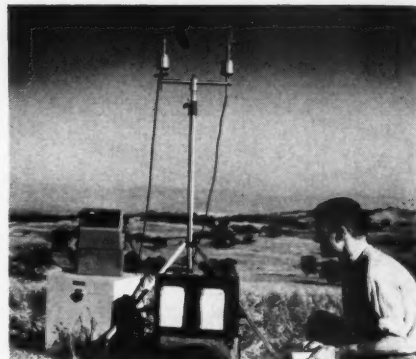
## PRODUCTS

(Continued from page 286)

### Meteorological Equipment For Industrial Site Planning

An electronic wind-speed-and-direction recording system has recently been developed by *Beckman and Whitley*. The equipment is designed to fill the growing need among industrial architects and engineers for such a means of

investigating meteorological conditions affecting projected plant sites. With the system it is possible to minimize later corrections of plant waste-discharge operating procedure. To facilitate its operation in the field by planning personnel, the unit has its own battery supply and weighs a total of only 100 lb. It can be left unattended for several days when longer-range recording is desired. The system provides accurate recordings of winds from below 1 up to 30 mph. Speed and direction data transcriptions are made on standard



Portable wind recorder aids in site planning for industrial buildings

**RESOLITE** paints with colored light. Six beautiful standard colors, a variety of form patterns and surface finishes, make Resolite easily adapted to any architectural or decorative motif in home, office or shop.

... the Translucent Structural Panel with endless possibilities in architectural treatment from the simple interior partition to exterior use in patio covering and colorful building facings.

Structurally rugged, RESOLITE is also shatterproof, avoiding the hazards of breakage and splintering in decorative or utility partitioning.

RESOLITE is unequalled for skylighting — either industrial or commercial — because it materially reduces heat rays with little loss in light values. It diffuses light in all directions, avoiding the harsh contrast of sunshafts. Economical, too, because of its installation ease and unlimited life.

Resolite is made of polyester resins, reinforced with Fiberglass mat. It is unaffected by weather extremes of heat, cold and moisture. It can be worked with ordinary tools and skill.

Write for free literature, with complete information about RESOLITE.

**RESOLITE Corporation**  
ZELIENOPLE, PA.

pen-type strip-paper recorders. The system is designed for operation under difficult field conditions, requires no critical adjustments and has all moving parts sealed and permanently lubricated. Permanent installation for continuous observation of conditions affecting plant operation is also possible. Beckman & Whitley, Inc., 1025 San Carlos Ave., San Carlos, Calif.

### Horizontal Flow Control Valve

The *Thrush* line of flow control valves has recently been expanded with a new horizontal valve. The valve reportedly can be installed in a horizontal flow main so as to permit the main to be carried near basement joists or ceiling. This is cited as being of particular value where basements have low ceilings. The valve can also be employed in zoned installations at any points in a building near the zones being supplied. Three sizes are available: 1, 1¼ and 1½ in. H. A. Thrush & Co., Peru, Indiana.

### Pencil Tracing Cloth Permits Liquid Eradication

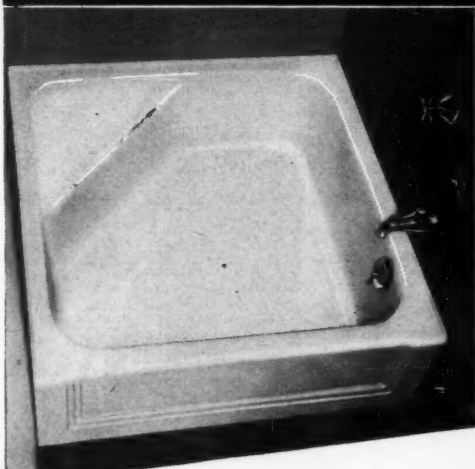
*Whitex Smooth* is a new pencil cloth which is said to permit the use of a liquid eradicator. According to the manufacturer, large pencil areas can be cleanly and quickly removed with a liquid eraser without destroying the tooth of the original cloth. The surface is a smooth white and reportedly produces sharp, jet black detail from a 2H pencil. Good prints are said to be assured by a high translucency which provides a maximum contrast between pencil lines and the white background. A companion liquid eradicator is furnished by the manufacturer. Price of the new cloth is said to be compatible with prices of ordinary cloths. Frederick Post Co., Box 803, Chicago 90, Ill.

(Continued on page 296)

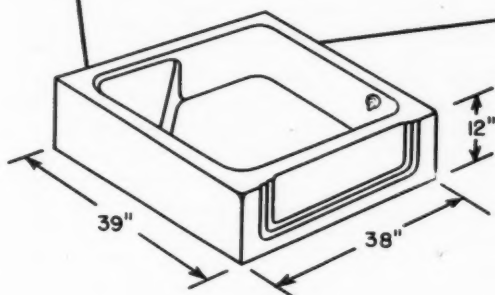


# AMERICAN-Standard

## BATHROOMS



*To help you pack  
a lot of bathing  
convenience into  
a limited space*



### LITTLE IN SIZE BIG IN CONVENIENCE

The 12" high Restal fits a finished compartment approximately 36" x 37", yet affords complete bathing facilities. It has all the advantages of sturdy construction, being made of rigid cast iron smoothly coated with acid-resisting or regular enamel in white or five popular colors. It comes with left or right hand outlet. Streamlined fittings are of non-tarnishing Chromard.



## ...here's the new RESTAL Receptor Bath

THE new Restal receptor bath provides complete bathing convenience in a shower stall space. And its cost is comparable with that of a properly-installed conventional shower stall.

Doubling as both a shower receptor and a bath, the Restal permits you to add an extra *complete* bathroom in small space in the homes you plan. And when it comes to modernizing, you can turn an unused closet, alcove, or sewing room into a really complete bathroom with the help of this space-saver. The Restal is ideal for use in small bathrooms of apartments, hotels, and motels, too.

Designed for utmost convenience and safety, the Restal is so low that even elderly people can enter and leave it with safety. Its corner seat facilitates foot and sponge bathing. And the Restal is particularly useful when bathing children.

Consider the Restal receptor bath in your planning. It will help you give more client convenience in minimum space. For complete details, contact the American-Standard sales office serving you or write for literature—Form No. 227.

American Radiator & Standard Sanitary Corporation, Dept. AR-52, P. O. Box 1226, Pittsburgh 30, Pa.

*Serving home and industry*

AMERICAN-STANDARD • AMERICAN BLOWER • ACME CABINETS • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILERS • ROSS HEATER • TONAWANDA IRON



# The internal construction of ATLAS FLUSH DOORS

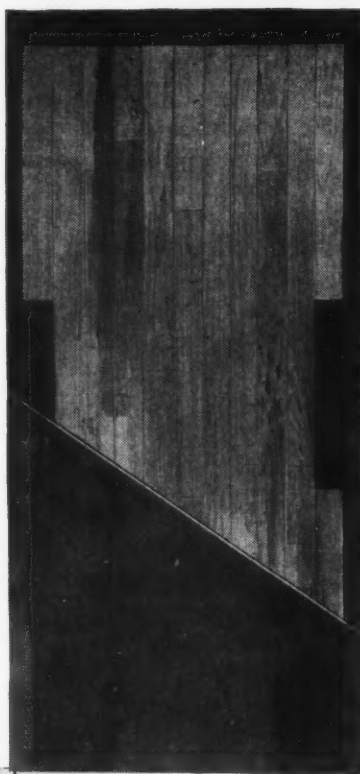
means  
lasting beauty and  
lasting strength

The exterior beauty of an Atlas Flush Door rests not alone on the simplicity of its lines and the superior quality of its surface panels . . . Its engineered, internal construction is a major factor that assures permanently fine appearance.

Whatever you choose for surface panels — Northern Hardwoods, Southern Gum, Western Fir or rarer Imported woods: Avodire, Mahogany, Prima Vera and the like—the principles of construction remain the same.

There is an Atlas Flush Door to fit every architectural scheme and every budget. If the door is to be painted, less expensive paint grade veneers are available. Similarly, stains on gum offer a choice of Mahogany, Walnut and other "furniture" finishes—with economy.

Every Atlas Flush Door is the product of a single, wholly integrated organization. From standing tree to completed door, there is one standard of control and inspection — one responsibility. We'd like you to know more about Atlas Hollow Core and Solid Core Flush Doors. For illustrated literature, kindly address your request to Department 69.



## SOLID CORE

The core material of the Atlas Solid Core Flush Door is Balsa Wood — inert, proof against stress and warpage. With the same K factor as cork, Balsa has important sound-deadening qualities. Its low thermal conductivity means efficient insulation. Its light weight means light weight for the finished door. The core blocks are positioned within a kiln-dried frame. Lock blocks on both sides permit the door to be hung from either right or left.



## HOLLOW CORE

In the Atlas Hollow Core Flush Door, kiln-dried soft wood struts — running both laterally and perpendicularly — interlock to form a grid. Wherever two struts interlock, the outer corners are beveled to permit free air circulation. The carefully machined frames are of kiln-dried White Fir or Ponderosa Pine. Lock blocks on each side permit hanging from either right or left. Before the surface panels are bonded to core and frame, the interior surfaces have been completely sized, to counter-balance the pull of the final exterior finish.



### 18 MANUFACTURING PLANTS

Anderson, Cal.	Gladstone, Mich.
Crescent City, Cal.	Munising, Mich.
Laurel, Del.	Goldsboro, N. C. (2)
Brunswick, Ga.	Plymouth, N. C.
Houlton, Me.	Klamath Falls, Ore. (2)
Greenville, Me.	Portland, Ore.
Patten, Me.	Williamsport, Pa.
Cadillac, Mich.	Newport, Vt.

### PANEL AND DOOR DIVISION

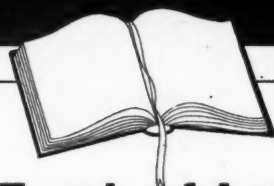
# ATLAS

## PLYWOOD CORPORATION

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Boston, Mass.	New York, N. Y.
Los Angeles, Cal. (2)	Goldsboro, N. C.
Oakland, Cal.	Cleveland, Ohio
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San Francisco, Cal.	Oklahoma City, Okla.
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Chicago, Ill.	Portland, Ore.
Evansville, Ind.	Pittsburgh, Pa.
Detroit, Mich.	Corpus Christi, Tex.
Gladstone, Mich.	Houston, Tex.
Grand Rapids, Mich.	San Antonio, Tex.
	Tacoma, Wash.

STATLER BUILDING, BOSTON 16, MASS. • Telephone: Hancock 6-0016 • Teletype: BS-644



## The Torch of Learning *Glow's More Brightly* with **LITECONTROL** Lighting

Geared for learning, planned for seeing... here's a library where high-level visibility goes hand-in-hand with high I.Q.

A custom job? Surely... *in everything but price!*

For LITECONTROL specializes in making a comprehensive line of

standard fixtures for every conceivable requirement... and fitting them to specific applications for the best results.

Thus, with LITECONTROL you get

the right light in the right place with the right appearance... at the least cost.

On your next job, call in your LITECONTROL representative.

See you at Booth 102, Lighting  
Exposition, Cleveland Auditorium,  
May 6th - 9th.

# LITECONTROL *Fixtures*

KEEP UPKEEP DOWN

LITECONTROL CORPORATION, 36 Pleasant Street, Watertown 72, Massachusetts

DESIGNERS, ENGINEERS AND MANUFACTURERS OF FLUORESCENT LIGHTING EQUIPMENT DISTRIBUTED ONLY THROUGH ACCREDITED WHOLESALERS

JOB: Newton Free Library Addition, Newton, Mass.  
ARCHITECT: W. Cornell Appleton & Frank A Stearns, Boston.  
ENGINEER: Thompson Engineering Company, Boston.  
ELECTRICAL CONTRACTOR: Norfolk Electric Co., Boston.  
AREA: Approximately 2,400 square feet.

FIXTURES: Luminous Lens Panels as follows:  
4 10'-3 3/4" x 8'-0" each w/11-96T12 slimline lamps.  
10 2'-9 3/4" x 8'-0" each w/3-96T12 slimline lamps.  
2 2'-9 3/4" x 4'-0" each w/3-48T12 slimline lamps.

WATTS PER SQUARE FOOT: 2.9 approximately.

AVERAGE INTENSITY: On table tops, 75 footcandles in service.  
Average over room, 57 footcandles in service.

BRIGHTNESS READINGS: Walls .045 candle per square inch.  
Floor .019 candle per square inch. Table top .069 candle  
per square inch. Fixture—Across lamp axis: At 45°, 0.72  
candle per square inch. At 30°, 0.29 candle per square inch.



## PRODUCTS

(Continued from page 292)

### Fenestration Developments

Two new developments for window areas are now available from *Marmet*. The first of these is an aluminum louver block, adaptable for kitchens, bathrooms or any small area which does not require a full size ventilating unit. The units are available to replace either one or two

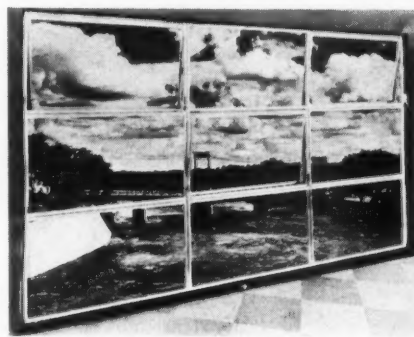
8 by 8 in. glass blocks in a panel. They are self-contained, glazed and screened, with an aluminum louver on the outside and with non-breakable, weather-tight Plexiglas sash on the inside. The weather seal is reported to make the blocks particularly useful in utility areas. The units are available through glass block dealers.

The second of the manufacturer's new developments is a completely fabricated aluminum window wall sash, ready to install into the window frame. Available in any combination of multi-



Louvered ventilating unit can be set into glass block panel units, above

Aluminum-sash window wall has both fixed and movable dual-glazed lights



ples from single units upward, the sash uses stock sizes of Thermopane ready for installation. Only two sizes of the glass are used, one for fixed lights and one for ventilating lights. The operating lights are complete with hardware and the units are shipped unglazed. Sash and frame are of welded construction and maintenance is said to be easy. *Marmet Corp.*, Wausau, Wis.

### Non-Mortising Hinge

The *Hurlinge* non-mortising type hinge requires no recess to accommodate it, since it screws to the door and frame, eliminating all mortising and chiseling. It is said to be self-aligning and self-gapping. The new design is available in standard sizes of 2, 3 and 4 in., with either loose or tight pin. Standard finishes are steel, brass plate, bronze plate, Cadmium plate, chrome plate and prime coat on bonderized base. *No-Mortise Hinge Corp.*, Bound Brook, N. J.

(Continued on page 300)



## MODERN COMFORT

by *Marlo*

Now bigger . . . better-equipped . . . the New Greater Jung Hotel of New Orleans, largest in the South, offers Marlo comfort in guest rooms of the beautiful new addition . . . and lower floor meeting rooms.

Specify Marlo Comfort Equipment for your next new or remodeling job.

Write for complete information.



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COOLING TOWERS • EVAPORATIVE CONDENSERS • INDUSTRIAL COOLERS  
AIR CONDITIONING UNITS • MULTI-ZONE UNITS • BLAST HEATING & COOLING COILS



Ductless Marlo Remote Units offer complete, economical summer-winter comfort conditioning.



Compact Marlo Floor and Ceiling Units efficiently serve any area.



AND NOW —

2

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**Fabron**  
REG. U. S. PAT. OFF.

**—for interior walls  
exposed to average wear**

This widely used wall covering is now available in a new collection—unsurpassed in the beauty and range of its colors and decorative effects.

You'll find colors that sparkle in gay, lively accents... colors that parade in deep "decorator tones"—colors that soothe in delicate pastel tints. You'll find geometrics—textures—abstracts—florals—plaids—yes, even "juveniles". In short, you'll find a collection to meet your every decorative need—and at a cost within the average budget.

Best of all, you'll find, in FABRON, decoration wedded with long-term durability—positive protection against plaster cracks—unlimited washability—sunfast colors—easy installation—and, of vital importance, certified fire protection.



**Permon**  
TRADE MARK REGISTERED

**—for areas subjected to  
heavier than average abuse**

The result of years of research, PERMON provides advantages never before combined in a wall covering. It's really rugged—developed especially for use as a wainscot in such areas as corridors, etc. where walls are subjected to constant abuse. Unusually attractive, too—13 beautiful "un-institutional" colors to choose from.

PERMON is moderate in cost and easy to install... requires no highly-trained, hard-to-obtain specialists. And once installed, its unparalleled stability, stain-resistance and washability assure permanent freedom from maintenance problems.

Why not plan on using both PERMON and FABRON? Remember—both are made by the *only firm specializing solely in plastifused fabric wall coverings for the institutional field!* May we send you samples and further details on either FABRON or PERMON via the coupon?

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Frederic Blank & Company, Inc.  
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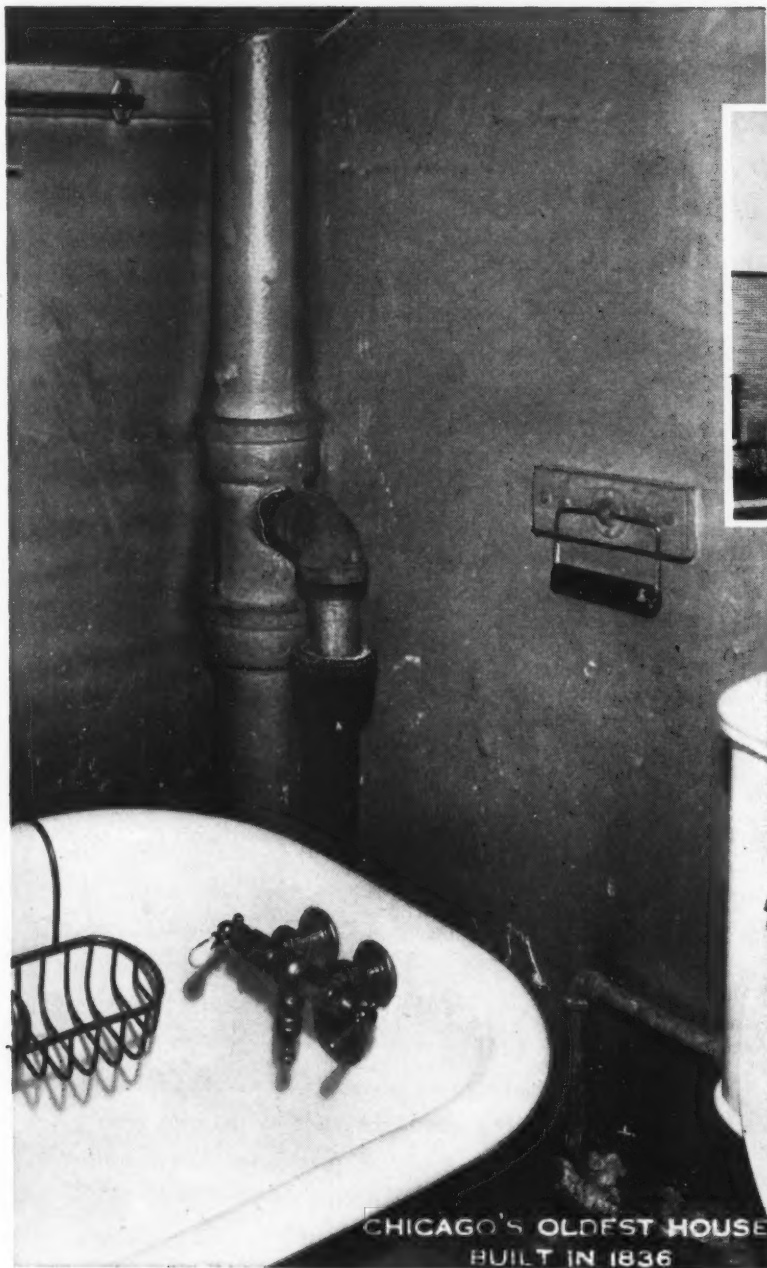
Title \_\_\_\_\_

Just fill in, clip to your letterhead and mail

AR 5-52

# NOT A MODERN RANCH HOUSE

—not by 116 years



CHICAGO'S OLDEST HOUSE  
BUILT IN 1836

This original 4" cast iron soil stack was installed in Chicago's oldest house back in 1836.



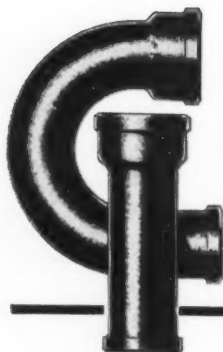
but the Cast Iron Pipe  
is still good

Some time in 1836 they installed the cast iron soil stack pictured above. It's in the oldest house in Chicago, now to be made a museum. Still good after 116 years, the pipe is being left right there to serve in the museum for another century or so. Do you know any material that can match that record?

Recently we mailed you a book entitled "Guide for Federal Specifications" covering extra-heavy and service-weight **Cast Iron Soil Pipe and Fittings**. If you have not received it and the handy file folder that goes with it, please write us.

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SOIL PIPE  
INSTITUTE**

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Anniston Soil Pipe Company  
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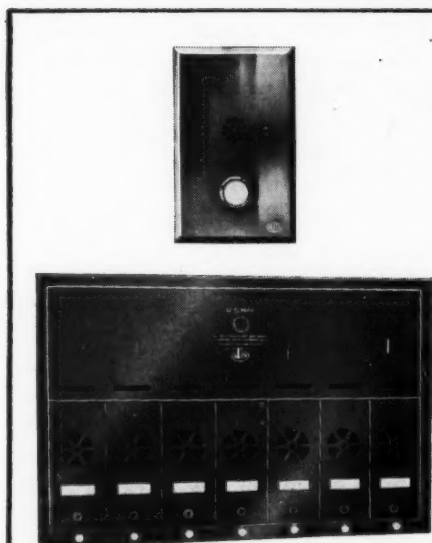
# NON-ELECTRIC DOOR CHIMES

Give ***EXTRA VALUE!***

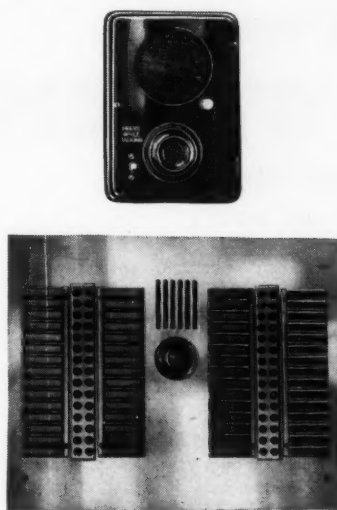
Choosing the right door chimes can mean savings of thousands of dollars on large scale housing projects — If they're Auth's *Parkchester Model Non-Electric Door Chimes*. These distinctively modern chimes not only eliminate expensive electrical wiring and accessories, but have such added features as a lookout window through the door for protection of the resident, and a personal name-and-apartment-number plate. Suitable for low or high cost, speculative or investment projects, the Parkchester Door Chime costs little initially, installs easily, and requires no maintenance. It is mounted on the apartment door, and operates by pressing a mechanical push button to sound two musical chime notes. It is as pleasing to the apartment resident as it is economical for the builder.

The Parkchester has been installed on numerous outstanding apartment projects throughout the world . . . including projects totaling 35,000 apartments by three leading developers: *Metropolitan Life, New York Life* and *Equitable Life Companies*.

OTHER AUTH PRODUCTS FOR HOUSING  
ARE ILLUSTRATED BELOW



U. S. Approved Apartment House Mail Boxes. Highest quality available, the choice of leading developers.  
Electrical Bell Systems. Visitor can call apartments and latter can operate vestibule door release.



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**MANUFACTURERS OF**  
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Literature is available describing these and other Auth products and systems.  
**Complete Systems • One Responsibility**  
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34-20 45TH ST., LONG ISLAND CITY 1, NEW YORK



## PRODUCTS

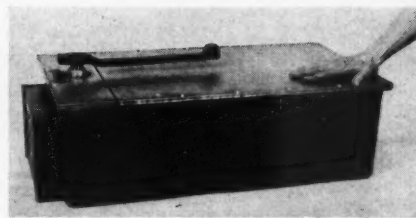
(Continued from page 296)

### Automatic Door Operator

The *Auto-Check*, an automatic, concealed-type door operator is pneumatically operated, hydraulically controlled, and is reported to be completely silent. Factory-adjusted to the weight of the door to be used and also factory-tested, the operator is said to afford

sizable savings in installation cost since on-the-job adjustments are eliminated. Size of the unit is 15 by 28 by 9 in. It is sealed against dirt and normal moisture and is furnished complete with spindle-arm and over-head fittings.

In operation, the operator is said to afford full control of door speed at every step of the operating cycle, so that playing children and wind conditions cannot affect it. A variety of controls can be used, including mats on both sides, mat on entrance side only plus time delay, push-pull actuation and combinations of



Automatic door operator is flexible in operation, can be used without mats

these. The single operating-mat control is reported to be especially good for installations where there is a short vestibule or restricted operating area. Vern Mfg. Corp., Spotswood, N. J.



## Here's an easy way to Plan a SOUND SYSTEM

Just call in your RCA Sound Distributor  
(he'll practically plan it for you!)

SOUND is a specialized field. That's why it's just good sense to pass your sound-system problems along to the man who works with sound every day . . . your own RCA Sound Distributor.

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**RADIO CORPORATION OF AMERICA**  
ENGINEERING PRODUCTS DEPARTMENT, CAMDEN, N. J.

In Canada: RCA VICTOR Company Limited, Montreal

### Plywood Construction Costs Reduced

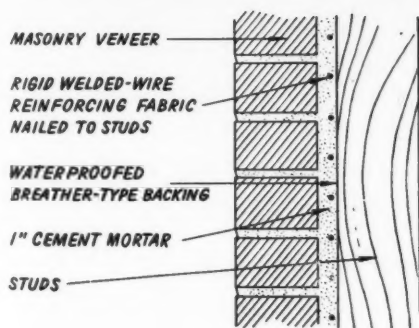
In recent action expected to result in significant cost savings for small home construction, the Federal Housing Administration has permitted the use of  $\frac{3}{8}$  in. Plyscord grade Douglas Fir Plywood for roof decking over rafters spaced 24 in. on center. Previously  $\frac{1}{2}$  in. plywood was required for such construction. The  $\frac{3}{8}$  in. decking is reported to cost 25 per cent less than  $\frac{1}{2}$  in. plywood sheathing, and spacing of rafters at 24 instead of 16 in. on center also reduces costs. Quick, easy installation of the material is cited as reducing labor costs in addition to initial material costs. Douglas Fir Plywood Association, Tacoma 2, Wash.

### Color System for Paints

A completely new system for matching any one of 180 colors against any other is now possible with the *Dramatone Color System for Spread Satin*. A total of 4,800 two-color combinations can be obtained from the 180 cards in the deck, due to the fact that each card is cut in two. The cards are contained in a ring binder, measuring 3 by 5 in., and a formula for mixing the colors is to be found on the back of each card. Colors in the system range over the entire spectrum, from the deepest to the lightest tones, making a wide selection available to architect or contractor. The Glidden Company, 11001 Madison Ave., Cleveland 2, Ohio.

### CORRECTION

The RECORD regrets that in reporting on *Flexflyte* flexible ducting, manufactured by Flexible Tubing Corp., it erroneously referred to the product on p. 334 of the March, 1952 issue as *Ferflyte*.



*Note from the drawing above and the photo below how Steeltex bonds a veneer wall together as a strong single unit and eliminates the need for standard sheathing.*



## 500 Families Get Added Fire Protection with Steeltex for Masonry Veneer

One very good reason for specifying *Steeltex for Masonry Veneer* on the extensive row-type Oglethorpe Apartments in Atlanta, Georgia was the added fire protection it offered, according to James C. Wise, architect for the development. Said architect Wise, "A highly fire-resistant wall was achieved by the solid, steel-reinforced, mortar slab.

"Another excellent reason," said Mr. Wise, "lies in the fact that Steeltex rigidly ties the brick veneer and frame together for mutual protection against later settling and distortion. In the Oglethorpe Apartments, I have noted that there has been no plaster cracking or breakaway."

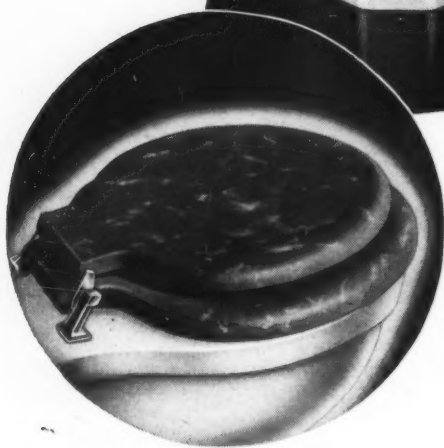
To take advantage of the stronger, safer walls Steeltex brings to your veneer construction, see our catalog data in Sweets' or write for Catalog DS132, Dept. AR, Pittsburgh Steel Products Company, Grant Building, Pittsburgh 30, Pennsylvania.

**Pittsburgh Steel Products Company**  
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*Church Gothic Tile, with distinctive contour face, shown in a Provincial style bath*



**No. 840 Church Regal Seat**

Church Seats, in plain or pearl finish, come in 32 colors. Their quality is as obvious as their beauty. At better plumbing stores everywhere.



For over thirty years Church Seats have offered architects a quality product with a national reputation, instantly recognized and accepted as . . . "The Best Seat in the House".

Now Church Plastic Wall Tile, made to the same high standards, backed by the same integrity, meets the architect's demand for a wall covering that is economical, easy to apply, permanently beautiful — and at home anywhere.

Light in weight (less than half a pound per square foot) Church Tile requires no expensive supporting construction, can be applied to any clean, smooth surface; is crack-, chip-, warp- and fade-proof, and immune to moisture, grease and common acids and alkalis.

Five complete lines and a range of 23 beautiful, decorator-authenticated colors to choose from. Ideal for new homes or old, and for commercial, industrial and institutional applications.

See your floor covering supplier, or write us direct for descriptive literature and free sample tiles.

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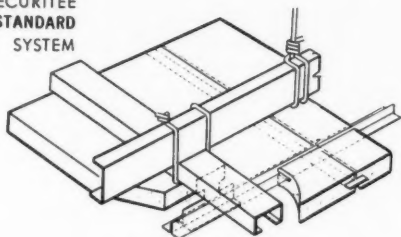




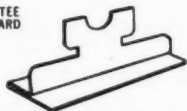
St. Mary's De Celle School, Berwyn, Ill.  
 Architect—Meyer & Cook, Chicago  
 General Contractor—Frank Burke & Sons, Chicago  
 Acoustical Contractor—General Acoustics Co., Chicago  
 Acoustical Tile—Fiberglas Textured, manufactured  
 by Owens-Corning Fiberglas Corp.,  
 installed on Securitee Standard System

*Versatility*

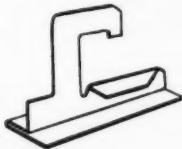
SECURITEE  
STANDARD  
SYSTEM



SECURITEE  
STANDARD  
CLIP



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**A** SECURITEE SYSTEM\* installation works equally well on new or remodeled construction, offering advantages that are not possible with other types of acoustical applications.

Easy access to piping or wiring—an inexpensive method of installing flush lighting fixtures.

These features combined with smartness in appearance and durability in construction, make SECURITEE the outstanding suspension system on the market.

**Remember...**

The component parts of any SECURITEE SYSTEM; Standard, 1½", or Limited; are made from the finest quality materials obtainable.

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FOR  
*Distinctive  
Kitchens*

When designing kitchens, consider the many advantages of using Philippine Mahogany for paneling, cabinets and trim. This fine hardwood, with its rich coloring and beautiful grain, makes kitchens that are distinctive, practical and beautiful . . . kitchens that will retain their charm for years . . . with only a minimum of care.

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PHILIPPINE LUMBER PRODUCERS' ASSOCIATION, INC.  
Manila

## Architectural Engineering

### LITERATURE

(Continued from page 216)

#### *Estimating Charts Simplify Home Electrical System Design*

• *Westinghouse Home Wiring Estimator.* Booklet contains 25 simplified work sheets which provide a convenient form on which to calculate branch circuit requirements, total load and feeders to loadcenters, as well as to figure costs, lay out load centers and feeders, and to check number and kind of outlets. Designed so that calculation sheet may be detached and given to client or bidders, it also has a cost record stub for each sheet. Instructions for use, plus simple tables of technical data for planning systems are included, along with an illustrated chart of various wiring devices. 25 work sheets, plus 4 pp. data, illus. Price 25 cents.

• *Electrical Living Homes; A Guide to Planning for Designers and Builders.* Booklet graphically illustrates basic steps in planning kitchens, laundries, lighting, health-promoting appliances, heating and wiring. Includes information on selection of equipment, grouping of work-center units and floor space requirements. 20 pp., illus. Both booklets available from Better Homes Bureau, Westinghouse Electric Corp., Box 868, Pittsburgh 30, Pa.\*

#### *Metal Thresholds*

*Thresholds by Wooster.* File portfolio contains 20 individual plates, showing full size cross-sections, dimensions, typical installation drawings and specifications for the manufacturer's complete line of abrasive cast, extruded and rolled steel thresholds. 20 pp., illus. Wooster Products, Inc., Wooster, Ohio.\*

#### *Plastics Work Surface*

*General Electric Textolite Monotop, Application Techniques.* Brochure describes the manufacturer's one-piece molded plastics work surface, as reported in *Products for Better Building*, p. 256, January, 1952, ARCHITECTURAL RECORD. Tables of properties and results of stain tests are included, together with section drawings. 6 pp., illus. General Electric Corp., Chemical Div., Pittsfield, Mass.\*

(Continued on page 308)

# A NEW SURFACE! A BEAUTIFUL THOROSEAL SURFACE!

**PILGRIM BADGE  
BUILDING**  
BOSTON, MASS.



Above photograph shows extreme blistering and spalling of concrete spandrel beams and columns of Pilgrim Badge Building, Boston, Massachusetts which is now entirely protected and further deterioration arrested.



Restoration of concrete spandrel beams and other structural concrete work done by contractor Henry Gironi, Allston, Massachusetts. THORITE Patching Mortar used to seal rods and patch blistered concrete and THOROSEAL to protect surface and patched areas.

## HOW TO DO IT

Get our 20-page brochure, pictorially described in detail; also, architect's chart for your wall.



**Standard Dry**  
NEW EAGLE

**40th  
YEAR**

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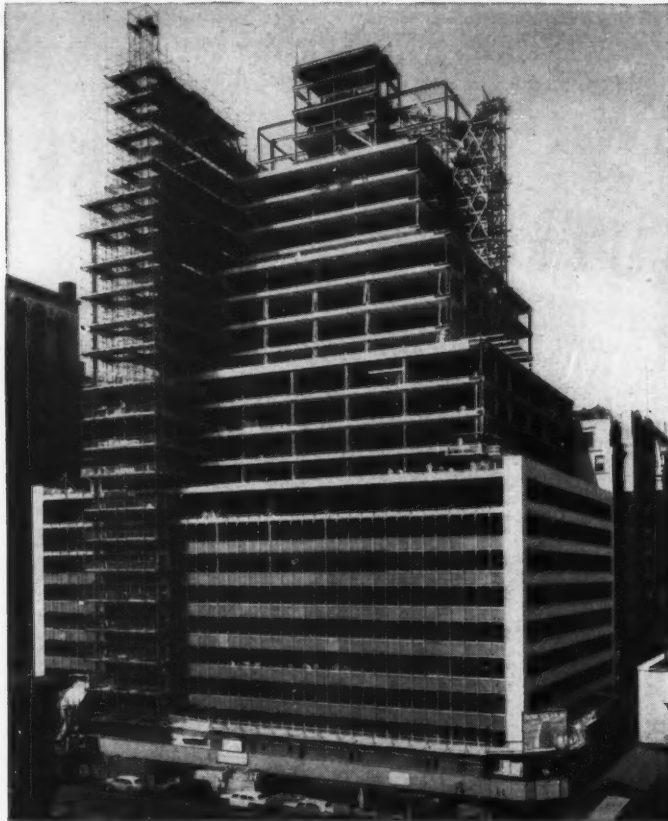


they  
saved  
steel

WITH FLOORS

AND FLOOR FILL

OF WAYLITE CONCRETE



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*Architect*

Weinberger & Weishoff  
*Structural Engineers*

Hegeman-Harris Co., Inc.  
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260 Madison Avenue Corp.  
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The use of Waylite aggregate for the 500,000 square feet of floors and another 350,000 square feet of floor fill in 260 Madison Avenue Building, New York saved much dead weight. This in turn permitted economies in steel design.

Other advantages due to Waylite in this new structure that will house "the aristocracy of business" include better ceiling heights; and prevention of the transmission of sound.

In other buildings, exposed Waylite masonry walls are sought because they need no acoustical treatment. Or because Waylite has important thermal insulation values.

Waylite's many advantages and its varied decorative treatments are discussed in an illustrated data book, which appears in Sweet's. Or ask for a copy by addressing The Waylite Co., 105 W. Madison St., Chicago 2, or Box 30, Bethlehem, Pa.

WAYLITE

LIGHTWEIGHT AGGREGATE



Holabird & Root & Burgee, Architects

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THE NORTHERN TRUST COMPANY, CHICAGO, ILLINOIS

LCN CATALOG 11-E ON REQUEST OR SEE SWEET'S • LCN CLOSERS, INC., PRINCETON, ILLINOIS



# The Architect's Question Box



Published now and then in  
the interests of wood finishing,  
by **FIRZITE\*** and **SATINLAC\***, those  
two little **WIZARDS WITH WOOD.**

\*TRADEMARKS

**QUESTION:** Are FIRZITE and SATINLAC intended for the finishing of plywood only?

**ANSWER:** No — White and Clear FIRZITE and SATINLAC can also be used on solid trim, doors, and moulding with the same results as on plywood.



**QUESTION:** Can FIRZITE and SATINLAC be sprayed?

**ANSWER:** Yes — altho FIRZITE and SATINLAC are formulated for brushing they can be sprayed.



**QUESTION:** Can FIRZITE be used for exterior work?

**ANSWER:** Yes — FIRZITE is excellent for exterior use as a primer or pre-sealer on softwoods such as fir plywood prior to spar varnish and so forth. However, FIRZITE by itself is not recommended as a finish for exterior work.



**QUESTION:** Is sealing the edges of fir plywood necessary?

**ANSWER:** It is very important, especially on exterior work, that the edges of fir plywood are sealed to prevent moisture entering the panel. FIRZITE is excellent for this purpose.

*If you have any problems in wood finishing, let us help you. Write also for specification sheet.*

*May we send you a blond Birch panel showing SATINLAC finish?*

**UNITED STATES PLYWOOD CORPORATION**  
Dept. 61, 55 West 44th Street, New York, N. Y.



## Architectural Engineering

### LITERATURE

(Continued from page 304)

#### Air-Entrained Concrete

*Foamasol, the New Foaming and Dispersing Agent for Air-Entrained Concrete.* Booklet explains the advantages of air-entrained concrete and furnishes information about the nature and properties of the manufacturer's additive concentrate. Tables showing results of laboratory and field tests of the product are included, along with suggested applications. 6 pp., illus. Onyx Oil and Chemical Co., Industrial Div., 190 Warren St., Jersey City 2, N. J.

#### Steam Generating Equipment

*Superior Steam Generators.* Features of the manufacturer's steam generators are highlighted in this catalog, which is illustrated with diagrams, photographs and cutaway drawings. Included is a table of data and dimensions for the equipment. 18 pp., illus. Superior Combustion Industries, Inc., Times Tower, Times Square, New York 18, N. Y.

#### Classroom Seating

*Education Grows.* Booklet underlines the importance of proper school seating, especially in regard to vision and posture. The manufacturer's new adjustable posture desk is illustrated and a selected bibliography of reference books dealing with lighting, seeing, posture and child development is included. 20 pp., illus. American Seating Co., 9th & Broadway Sts., Grand Rapids 2, Mich.\*

### LITERATURE REQUESTED

The following individuals and firms request manufacturers' literature:

Benito Govezensky, engineer, Av. Schiller, 413, Mexico 5, D.F., Mexico.

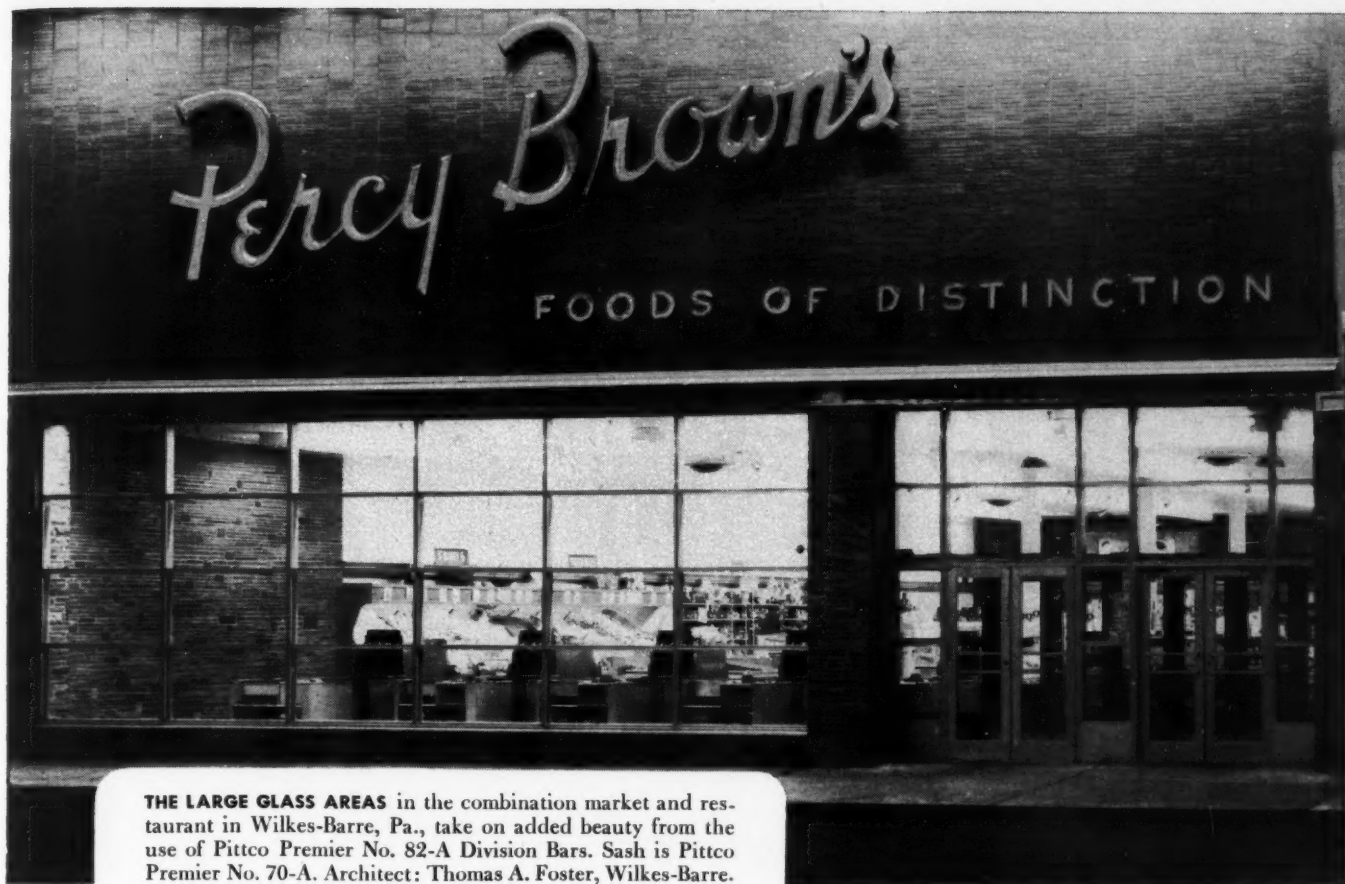
Ellery C. Green, student, 618 So. Ashlet St., Ann Arbor, Mich.

Norman J. Hamill, A.I.A., architect, 211 Medical Arts Bldg., Butte, Mont.

Nathan Lubroth, architect, 235 N. Grove St., Valley Stream, N. Y.

Athol D. Richards, student, 10 Trafford Ave., Elsternwick, S4, Melbourne, Victoria, Australia.





*Distinctive design in divided glass areas*



(A) Pittco Division Bar No. 82-A (also available without steel reinforcing tube).  
(B) Pittco Muntin Bar No. 32. (C) Pittco Division Bar No. 28.

● From both the Premier and De Luxe lines of Pittco Store Front Metal, you can select Division Bars that blend perfectly with other Pittco members. The result is distinctive, symmetrical design in store fronts with divided glass areas.

Pittco Division Bars offer you plain, angular lines with minimum dimensions. They have adequate strength to satisfy structural requirements of this type of design. They facilitate easy setting and easy glass replacement.

You'll find the complete line of Pittco Store Front Metal gives you the widest latitude in modern design. See your Pittco representative for complete information.



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##### 1. Construction is simplified.

Each unit comes complete with fire-box, throat, down-draft shelf, damper and smoke dome... fully assembled. Only the decorative masonry is needed to complete the installation.

2. You know in advance your fireplace will work properly. The scientific design protects you against rule-of-thumb building methods... assures smokeless, trouble-free operation... reduces the need for constant on-the-job supervision.

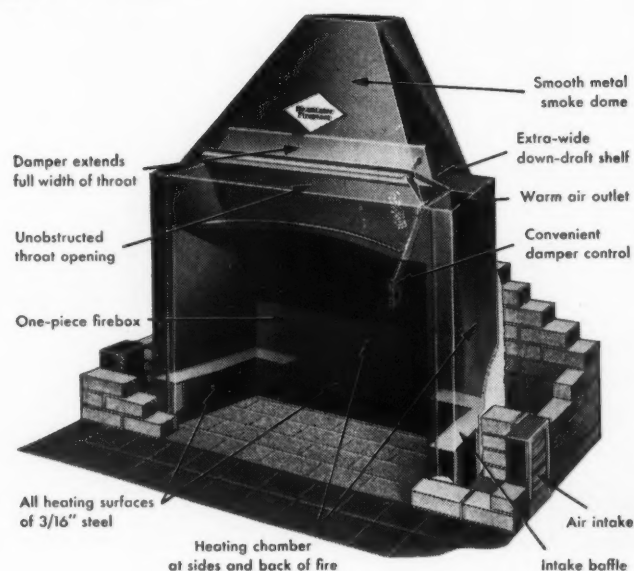
3. It is truly "functional". It circulates heat throughout the room instead of wasting most of it up the chimney.

The Heatilator Fireplace puts no limit on mantel design or use of materials... gives you complete freedom of architectural expression. It's ideal for basement rooms too... and as a supplemental source of comfort during service interruptions or emergencies. The leader since 1927, Heatilator Fireplaces have been proved in actual use by hundreds of thousands of satisfied home owners. Specify "Heatilator" in your next home or group of homes. Heatilator, Inc., 385 E. Brighton Ave., Syracuse 5, N. Y.

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## with the HEATILATOR T. M. REG. U. S. PAT. OFF. FIREPLACE



# auditorium roof crafted by Overly



*For permanent freedom from maintenance, repairs, and leakage, the General State Authority of Pennsylvania specified this Overly-Goodwin Batten Type aluminum roof.*

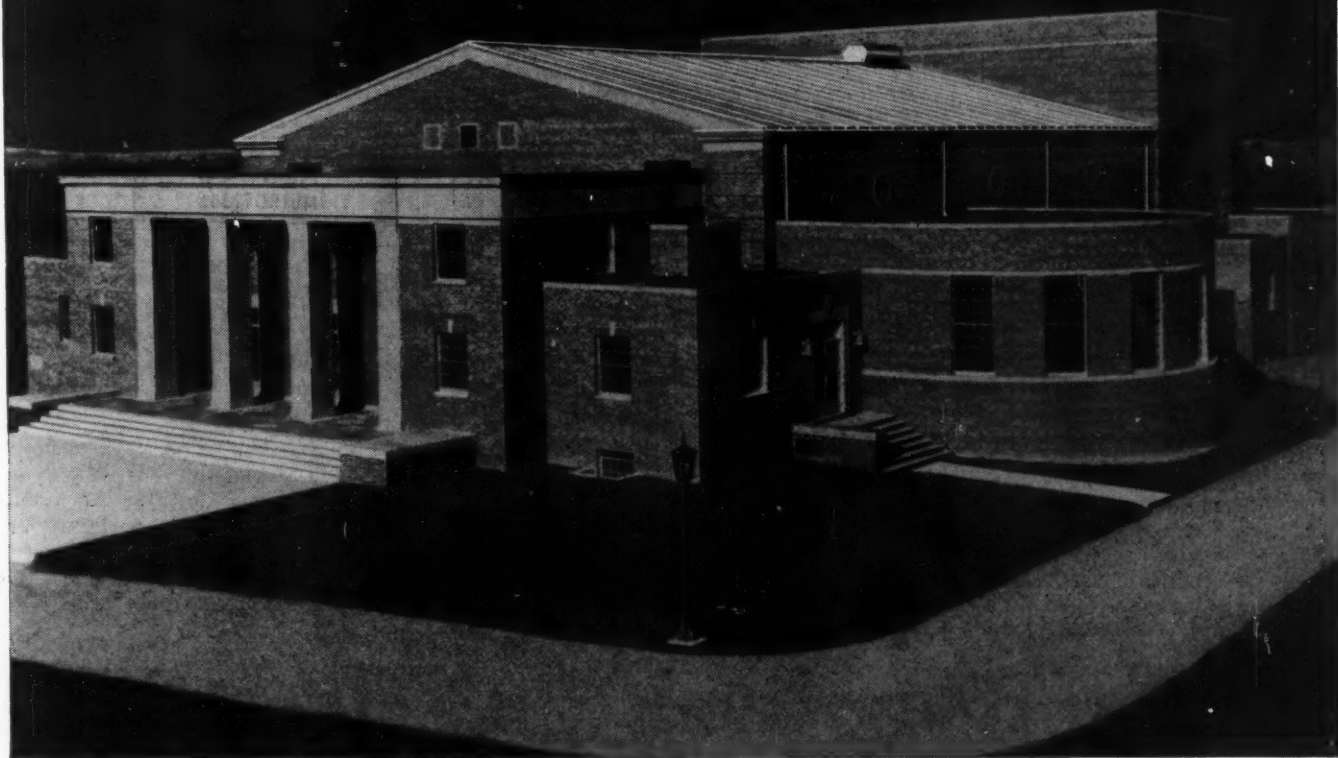
*BUILDING: Shippensburg State Teachers College Auditorium at Shippensburg, Pennsylvania. ARCHITECTS: William Lynch Murray & Associates, Harrisburg, Pennsylvania. GENERAL CONTRACTOR: Earl L. Cump of Chambersburg, Pennsylvania.*

*• Overly fabricated and erected the roof, ventilator, gutters, and conductors—all of aluminum with Alrok finish. For further details on this patented construction, send for Overly Catalog 8-B.*

## OVERLY MANUFACTURING COMPANY

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• Sales Representatives in All Principal Cities •





## THE BIG NEWS IS THE BIRTH RATE

(Continued from page 202)

Stated merely as a percentage the production job does not seem so very big. Actually, the number of new consumers to be provided for, 20 to 22 millions, is larger than the combined present populations of Australia and Canada, larger than the population of Iran plus the population of Iraq, more people than the total in Norway, Sweden, Denmark plus Switzerland; nearly as many as in

Argentina and Chile combined. So, it appears that we are going to have to stretch our facilities quite a bit to take care of all these new Americans. We shall be obliged to have a Point IV program for underdeveloped people right here at home.

Moreover, the number of persons of ages suitable for recruitment in the labor force will increase not more than 8 or 10

per cent between 1950 and 1960, compared with a probable 14 per cent increase in number of consumers. This means that output per worker engaged in production will have to increase considerably if the 1950 living standard is to be maintained.

Mr. John S. Collyer, chairman and president of B. F. Goodrich Company, has stated that in order to produce enough for our increased 1960 population and carry an adequate military establishment, productivity per worker must increase 30 per cent or more during the decade. He has further stated that this increased productivity will require investment of \$200 billions in expanded capital facilities of all kinds.

Such investment, of course, would include mines and mining equipment, farms and farm machinery, and process machinery as well as new factories and power plants. It is obvious, however, that industrial and power plant construction would have to be very large indeed. Along with increased factories and power plants would necessarily come warehouses, stores, shopping centers and all the other distribution facilities of our economy.

The fear expressed by certain economists, that the United States is due for a future recession to be caused by inability to consume the expanded output of our mines and farms and factories, does not seem well-founded. In fact, many a country facing the prospect of such a large increase in consumers would be worried about providing enough food, clothing and shelter.

### WILL LIVING STANDARDS BE MAINTAINED OR BETTERED?

Mr. Collyer's estimates covered maintenance of already-achieved living standards. Like Alice in the story book, the American economy will have to run like the devil in order to stay under the same tree. To go places, it will have to run much faster.

It appears extremely unlikely that we will stay under the same tree. It is much more likely that the American economy will either slip backward or make forward strides.

The American people rather obviously expect to go forward. They are today demanding and getting higher quality housing and school buildings than ever before. For more than a decade they

(Continued on page 314)

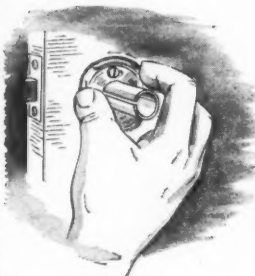
## One of the many extra-benefit features built into

# NATIONAL LOCKset

Patent Applied

**CLAMP PLATE QUICKLY ENGAGES  
KEYWAY...MERELY TIGHTENING  
CLAMP PLATE SCREWS FIRMLY  
FIXES LOCK ASSEMBLY IN DOOR  
...SAVES INSTALLATION TIME**

Shown here is another step in NATIONAL LOCKset's remarkably simple installation procedure. Extensively field proven on the job, NATIONAL LOCKset is fast becoming the Number 1 favorite among contractors, builders and architects because of its important savings of valuable time.



### AMERICA'S OUTSTANDING LOCKSET VALUE

Compare NATIONAL LOCKset point for point with any other lockset on the market. Note the use of selected cold rolled steel, brass and bronze. Note the absence of any die-cast parts. Examine its exclusive engineering features. Make your decision only after you have investigated NATIONAL LOCKset in detail.

**NATIONAL  
LOCKset**  
KEY LOCKS  
KEY CONTROL  
LOCKS  
TURNBUTTON  
LOCKS  
PUSHBUTTON  
LOCKS  
PRIVACY LOCKS  
KNOB LATCHES



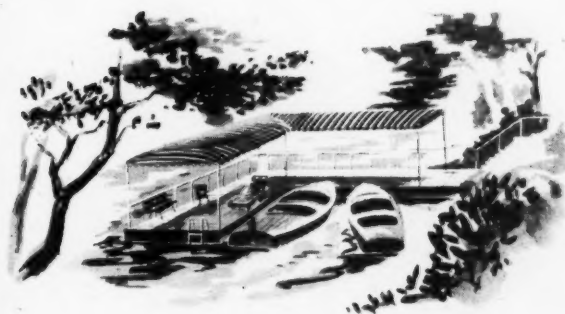
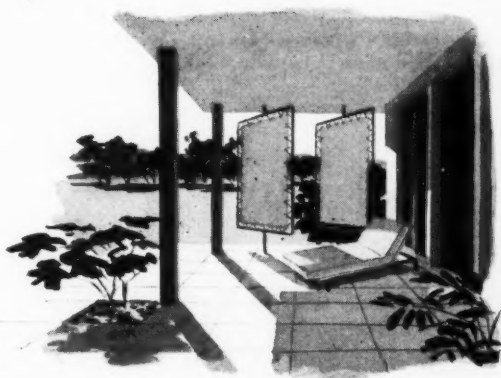
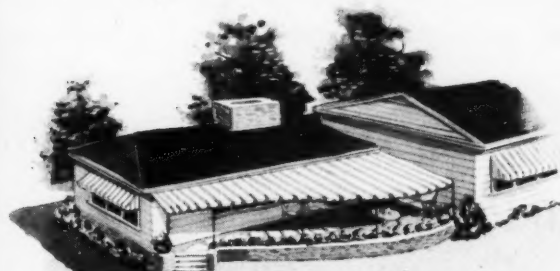
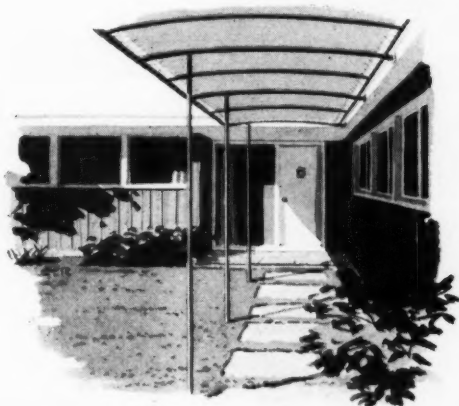
AVAILABLE FROM YOUR SUPPLIER



**DISTINCTIVE HARDWARE...ALL FROM 1 SOURCE**  
**NATIONAL LOCK COMPANY**  
ROCKFORD, ILLINOIS • MERCHANT SALES DIVISION

# modern design and Canvas

CANVAS today . . . the flexible, economical fabric that enables MODERN DESIGN to achieve practical sun control, unlimited color, lightness and beauty



• These sketches show the vast and surprising capabilities of CANVAS for solving problems of solar heat control, while lending color, grace, and atmosphere to the homes you design. From the architect's viewpoint, nothing can match CANVAS in providing maximum design flexibility. And no building material can accomplish the basic purpose of providing sun protection more economically.

Talk to your local Canvas Goods Manufacturer about specifications.



CANVAS AWNING INSTITUTE, INC.  
and NATIONAL COTTON COUNCIL

## THE BIG NEWS IS THE BIRTH RATE

(Continued from page 312)

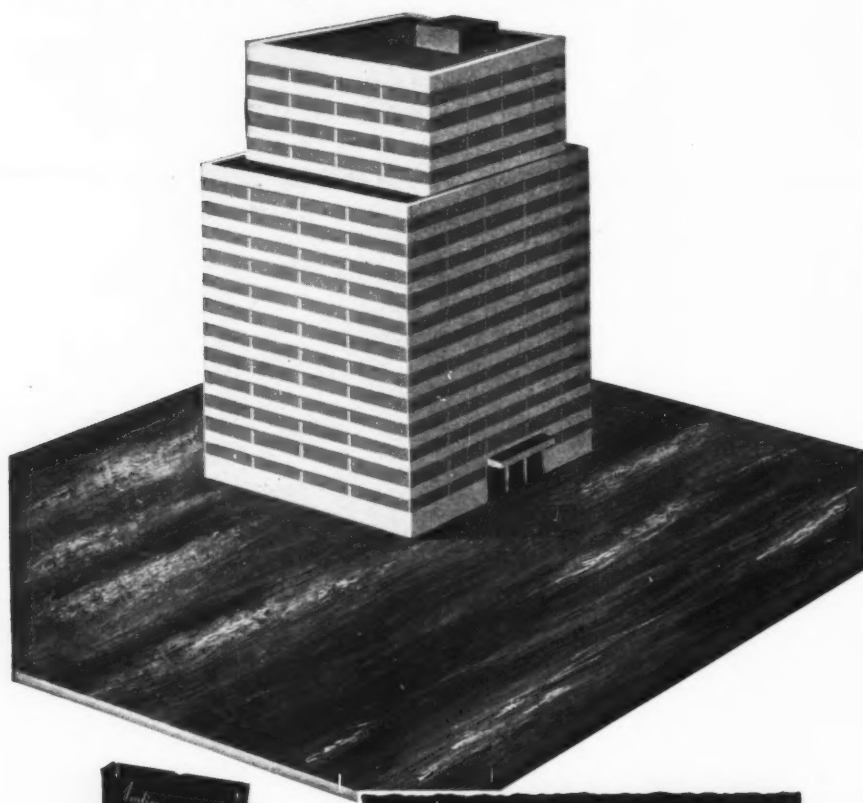
have enjoyed improved diets, better clothing, higher grade shelter and increased numbers of household conveniences and other goods and services, as well as more babies and a fuller family life.

The recent history of improvement in living standards in the United States is shown in Chart V. In this chart actual annual consumption expenditures are

plotted against estimated expenditures required to maintain the 1929 standard. In other words, the requirement for each year after 1929 is obtained by multiplying the 1929 consumption total by two factors: (1) a factor denoting the population change; and (2) a factor denoting the change from 1929 in the consumers' price index.

Consumption dropped below the 1929

Put **America's most beautiful flooring**  
in that new apartment house ...



### SAMPLES ON REQUEST

A free box of 4" x 4" samples of Amtico Flooring in standard 1/8" gauge and all 26 stock colors sent, with illustrated literature, on request. Dept. AR-9.

Also makers of Famous Bilrite NURON Soles and Rubber Heels

**AFFILIATES...** BILRITE RUBBER COMPANY, CHELSEA 50, MASS. • AMERICAN TILE & RUBBER CO., TRENTON 2, N. J. • PANTHER-PANCO RUBBER CO., CHELSEA, MASS. • AMERICAN TILE & RUBBER CO. (CANADA) LTD., SHERBROOKE, QUEBEC • PANTHER RUBBER CO. LTD., SHERBROOKE, QUEBEC, CANADA

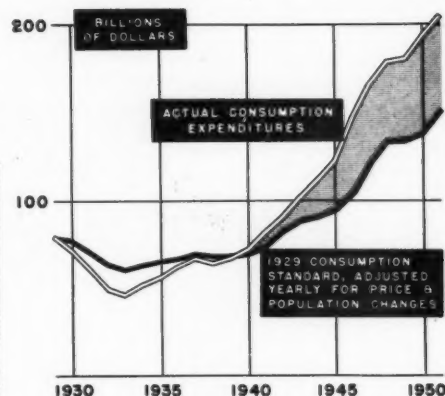


### AMERICAN BILRITE

RUBBER COMPANY  
TRENTON 2, NEW JERSEY

CHART V

**LIVING STANDARDS  
HAVE RISEN SHARPLY  
SINCE 1940**



level in the depression decade 1930-1940 (which was also the decade of reduced population growth). Ever since it regained the 1929 level in 1940 it has continued well above it up to the present time. Per capita consumption of goods and services increased 32 per cent between 1940 and 1950, after due allowance for changed price levels. This may have been the most spectacular advance in living standards yet recorded in history.

Since the number of consumers increased nearly 15 per cent during the 1940-1950 decade and since each 1950 consumer enjoyed 32 per cent more goods and services than his 1940 counterpart, the output of consumer goods and services increased about 52 per cent in the decade. Increased output of consumer goods accompanied a like increase in capital goods and war materials combined.

The 52 per cent increase in total goods and services was accomplished by an increase of only 26 per cent in the total number of employed production workers. There was enormous investment in modern new plants, new production machinery and new processes; there were also great forward strides in management techniques. A highly favorable augury for the future is the tremendously increased activity that has taken place in the fields of industrial and agricultural research, in new product devel-

(Continued on page 316)



*Specify...*

*Masland Durasol*

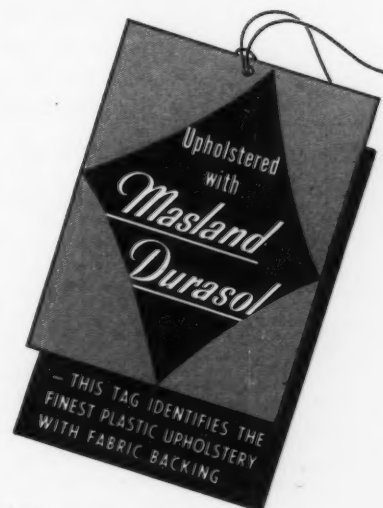
*plastic upholstery with fabric backing*



**HIGH** *in beauty*  
**LOW** *in upkeep*

Furniture by  
Home Chair Co., Ronda, N. C.

Masland Durasol . . . a 'natural' for modern home or institutional planning. Fashionable upholstery colors for every interior. Easy to keep clean with a damp cloth. Long wearing and smart looking on furniture for every room. Practical and distinctive on booths, stools and seats in restaurants and hotels. Specify Masland Durasol for extra client satisfaction. Recommend it for new installations. Suggest it for redecorating. Write for samples.

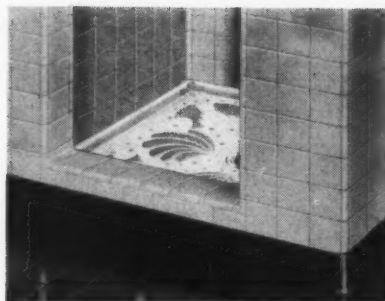


THE MASLAND DURALEATHER COMPANY • DEPT. 36, PHILADELPHIA 34, PA.

BEAUTY...

SAFETY...

IN THE



POSITIVELY LEAKPROOF

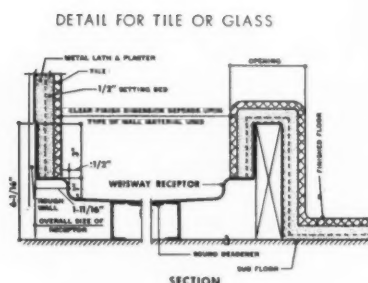
*Weisway* VITRECEPTOR



FOR BETTER  
SHOWER BATHS

Formed in one piece of heavy gauge enameling iron . . . finished inside and outside in vitreous porcelain enamel . . . Weisway Vitreceptor is a better, more practical stall shower receptor. Easy to install—no metal underpans, no wall flashing, no waterproofing required. Vitreceptor unit is positively leakproof, sanitary, non-absorbent, with no dirt-catching cracks or joints. Textured Foot-Grip, No-slip floor is safe, comfortable, quiet as the tread of a bare foot.

Sketch at lower left shows detail for use with tile or glass walls.



Specify Weisway Vitreceptors for safety and dependable leakproof service which assure satisfied clients, protect your reputation. Write now for catalog with specifications and detailed information.

HENRY WEIS MANUFACTURING CO., 503 Weisway Bldg., Elkhart, Indiana

## THE BIG NEWS IS THE BIRTH RATE

(Continued from page 314)

opment, and in merchandising and distribution processes.

Analysis of what happened to living standards between 1940 and 1950 and contemplation of what might happen from 1950 to 1960 seem to warrant indulgence in the speculative figures shown in Table I (page 202). Section B of the table shows that in order to achieve for the 1960 population a rather moderate improvement in living standards will require a 27 per cent increase in total consumer goods and services over the 1950 output, the all-time record up to now.

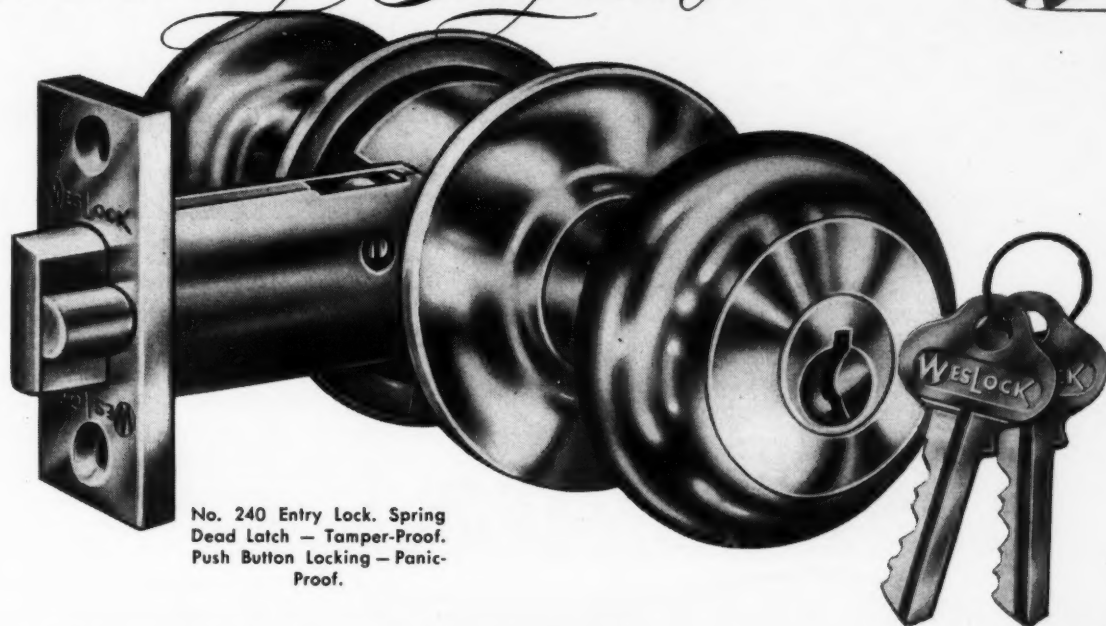
### EXPANSION POTENTIALS

It is obvious that the American economy, after the almost disastrous interlude of the 1930's, is back again on its normal course of economic growth and expansion. Further than that, it has acquired a tremendous momentum, proving that it has been revitalized in energy and in outlook to an astounding degree. Its potentials for further growth and expansion are such that we may quite possibly have ahead a greater prosperity, with larger annual volumes of construction, than anything the nation has yet experienced; we can have all that and an adequate defense program, too.

The strong and vigorous private economy, currently supporting consumption within 1 per cent of the highest level in history and government at its most extravagant peacetime level, certainly needs no artificial support from government. It does, however, need the cooperation of government to the extent that expansion potentials will not be dissipated through inflation or strangled at birth by a scale of taxation which in effect confiscates in advance the capital funds of the coming generation. It also needs a careful husbanding of the country's basic resources. The same government which is urging the peoples of foreign countries to encourage investment of American capital might do well to apply this same principle at home.

Perhaps the greatest asset of all is the revival of the go-ahead spirit of the American people which is in evidence on all sides. The unknown but obviously considerable extent to which the current record-breaking baby crop results from voluntary parenthood constitutes a very significant vote of confidence in the future of the United States. I can't believe they've set out to raise a generation of pessimists.

*Smartly Styled*



No. 240 Entry Lock. Spring  
Dead Latch — Tamper-Proof.  
Push Button Locking — Panic-  
Proof.

**...FOR EVERY DOOR IN THE HOUSE**

ACCEPTANCE of WESLOCKS by architects, builders and lending institutions for use on many of the nation's largest building projects is evidence of the outstanding values the line offers. For example, all WESLOCKS

have an easy spring latch with a light spring for the bolt and heavy-tension knob return—a feature found only in the most expensive

locks. Also, WESLOCKS have key-in-knob construction, 5-pin tumbler locking mechanism for maximum security, split spindle, independent knob operation, factory assembled units, self-aligning feature and a wide choice of handles, ornamental escutcheons and finishes.

Best of all, WESLOCKS are priced to meet the most modest budgets. Truly, they offer you the best hardware value at any price.

Send today for catalog.



Another WESLOCK installation.  
Park Forest, Illinois. Contains a total of  
3,010 apartments, 5,000 homes,  
a shopping center and light industrial  
area...  
living units are WESLOCK equipped.  
Architects: Loeb, Schlossman & Bennett  
Chicago, Ill.  
Builder: American Community Builders, Inc.  
Chicago, Ill.  
Hardware Contractor: Schuhman Hardware  
Co., Chicago, Ill.

**WESTWOOD**

MANUFACTURING CO.  
P.O. Box 2261, Terminal Annex  
Los Angeles 54, California



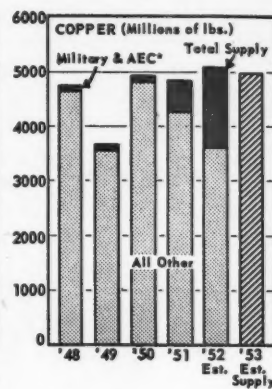
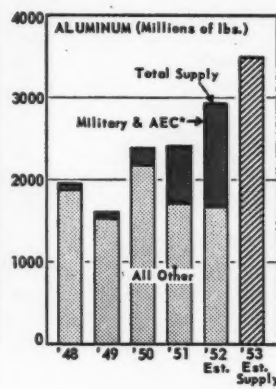
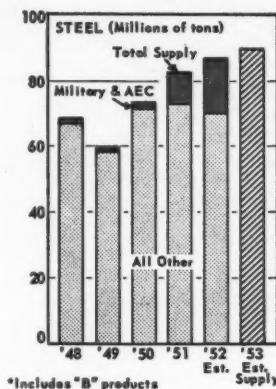


## THE RECORD REPORTS

### WASHINGTON

(Continued from page 38)

Charles E. Wilson's Fifth Quarterly Report on Defense Mobilization showed that though requirements of the military and AEC are expanding, likewise expanding steel and aluminum production just about offset the gain, with result that non-military supplies, except for copper, remain about the same.



## STANDARD FOR ACID RESISTANCE

### DURIRON Acidproof Drain Pipe

Duriron lasts the life of the building under most corrosive conditions. Resistance to corrosion is the thickness of the pipe wall. Duriron pipe can be placed within walls or floors without fear of leakage or need of replacement. Duriron pipe is installed by ordinary plumbing methods.

For full details on these and other reasons why Duriron is "standard" for corrosive waste disposal, write for the free catalog PF/1.

**DURIRON**  
LOOK FOR THE NAME ON EVERY PIECE

**THE DURIRON COMPANY, INC.**  
405 North Findlay Street, Dayton 1, Ohio

### More Schools Allowed

Approximately 500 school projects were to be given the go-ahead for the third and fourth quarters of this year because of a new upsurge in the quantities of available construction materials.

School officials receiving construction permits and material allocations are permitted to proceed immediately with preliminary work of clearing sites and excavating. They also may place orders for controlled materials for their projects.

(The additional authorized jobs will include all school and hospital construction for which applications had been received in seven localities designated as hardship areas because of unemployment: New York City, Boston, Washington, D. C., Portland, Ore., Seattle, San Francisco and Los Angeles.)

### Conservation Efforts Lauded

In announcing the new go-ahead for the hundreds of additional school building projects, Federal Security Agency Administrator Oscar Ewing again praised both school and hospital officials for designing substitute materials into their projects and for developing conservation techniques.

This result has been achieved, he pointed out, by cooperative efforts on the part of the American Institute of Architects, the Defense Production Administration and the National Production Authority.

"The Nation has built more schools with relatively smaller supplies of critical materials than otherwise would have been possible," the Administrator said.

### The Problem Remains

Encouraging as it may be, this decision to break out 500 projects heretofore deferred for lack of steel, copper and aluminum, represents a feeble attack,

(Continued on page 320)

# Now...

added to the Silvray line of  
special-effect lighting units —

## THE SILVER-DOT RECESSED DOWNLIGHT



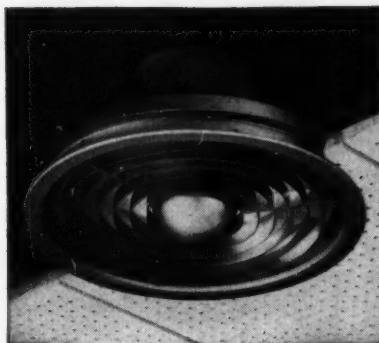
Featuring complete concealment of the light source, this compact Silver-dot unit rounds out Silvray's line of all-purpose incandescent downlights.

Employing a 4" ceiling aperture for passage of a precisely-focused light beam, the Silver-dot is ideally suited for supplementary accent or special-effect lighting in commercial and residential interiors.

Silver-dot units are designed for use with the new 100-watt A-21 clear silvered-bowl lamp. They produce more candle power than equipment using 150-watt reflector or projector lamps ... use less energy ... generate less heat.

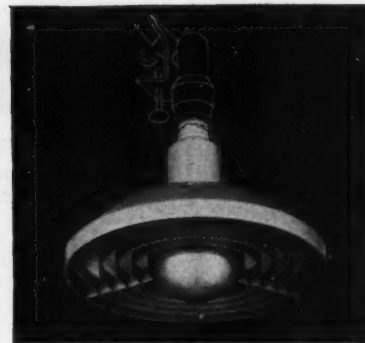
Placed 6' above the surface to be lighted, for example, the Silver-dot casts a 6' glare-free light circle. Relamping, without removing the ceiling plate, restores the unit to initial efficiency.

Easy to install, the Silver-dot requires a ceiling opening only 6½" in diameter ... a recess depth of only 7¼".



**THE SILVER-SPOT**

Companion piece to the Silver-dot, this versatile, general-purpose downlight is available for both recessed and surface-mounted installations. 10¼" in diameter, the Silver-spot requires an opening depth of only 5¼" for complete recessing ... projects only 3½" when surface mounted. Precision light control of built-in reflector eliminates glare and wasted spill light. Louvre provides 45° shielding.



**THE SILVER-SPOT ADAPTOR**

Designed as a portable unit, this 8" diameter version of the Silver-spot is equipped with a "screw-in" adaptor base to fit standard porcelain receptacles or swivel fittings. Both the Silver-spot and Silver-spot Adaptor unit use the 100-watt A-21 lamp to obtain the warm color quality so much in demand by merchandising experts. Both units are easily convertible to either floodlight or spotlight distribution.



**--- SEND FOR COMPLETE DETAILS ---**

**SKYLIKE LIGHTING, INC.** — A Silvray-associated company  
102 West Main Street, Bound Brook, New Jersey

Gentlemen:

Please send me further information on Silver-spot and Silver-dot units.

Name \_\_\_\_\_

Firm \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

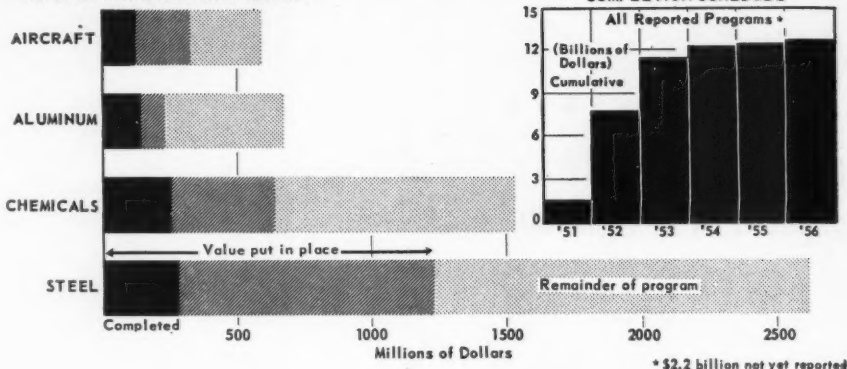
## THE RECORD REPORTS

### WASHINGTON

(Continued from page 318)

Chart from Charles E. Wilson's final report shows that construction of new plant facilities aided under Defense Mobilization program has reached the half-way point with completions and commitments to date. Expected future development of program is shown in smaller completion schedule

#### SELECTED PROGRAMS AIDED UNDER DEFENSE MOBILIZATION PROGRAM



## FACTS FOR ARCHITECTS ABOUT "CONSTRUCTION BY ADHESION" \*

HERE ARE NEW METHODS  
WHICH MEAN SUBSTANTIAL  
SAVINGS IN LABOR AND

MATERIALS FOR MODERN CONSTRUCTION  
in both **NEW** building and **MODERNIZATION**

WRITE TODAY FOR RECOMMENDED SPECIFICATIONS ON  
1. Setting Genuine Clay Tile. 2. Insulating Ducts. 3. Insulating walls and ceilings  
either by Direct Adhesion or in conjunction with Surface Anchors. 4. Installing  
floor runners; bonding furring strips.



Today it is normal procedure to install clay tile in hotel bathrooms without losing a night's revenue. This illustration shows one of the 144 rooms in the White Plaza Hotel, Dallas, Texas, in which MIRACLE ADHESIVE was used to do the job from the time the guest left his room in the morning until he returned that afternoon.



Plaster applied over wire and cork which has been attached to aluminum ducts using MIRACLE ADHESIVE and MIRACLE SPINDLE ANCHORS at John Hancock Mutual Life Insurance Co. Building, Boston, Mass. ARCHITECT, Cram and Ferguson. BUILDER, Turner Construction Co.



FIBERGLAS insulation, Type PF-613, 2" thick — bonded to concrete ceiling using MIRACLE PRONGED ANCHORS at Radio City Studio 6B, New York, N. Y. CONTRACTOR, William J. Scully, Inc., New York, N. Y.



WOOD RUNNERS installed on concrete floors with MIRACLE ADHESIVE and MIRACLE ANCHOR NAILS to support 2" solid partitions. Washington Circle Apartments, Washington, D.C. GENERAL CONTRACTOR, Charles H. Tompkins Company.

VISIT MIRACLE EXHIBIT AT ARCHITECTS SAMPLES CORP. 101 PARK AVE., NEW YORK CITY  
Distributed Coast to Coast and in Canada

indeed, on the long-run problem of providing adequate school housing, which the U. S. Office of Education keeps reiterating is one of the most pressing current problems facing the Nation.

The Federal Security Agency report for fiscal 1951, released last month, asserts: "More than ever, if we are to come safely through the long period of stress that lies ahead, we must face squarely the need for action — and action now — looking toward the effective solution of (this) problem."

What is the need?

### Seek Private Construction of Government Office Buildings

A large volume of federal office building design and construction is in prospect for architects and contractors if Congress approves legislation now pending. This provides for a new lease-purchase arrangement whereby the Public Buildings Service of the General Services Administration would supervise construction of government buildings but these structures actually would be financed and erected by private contractors.

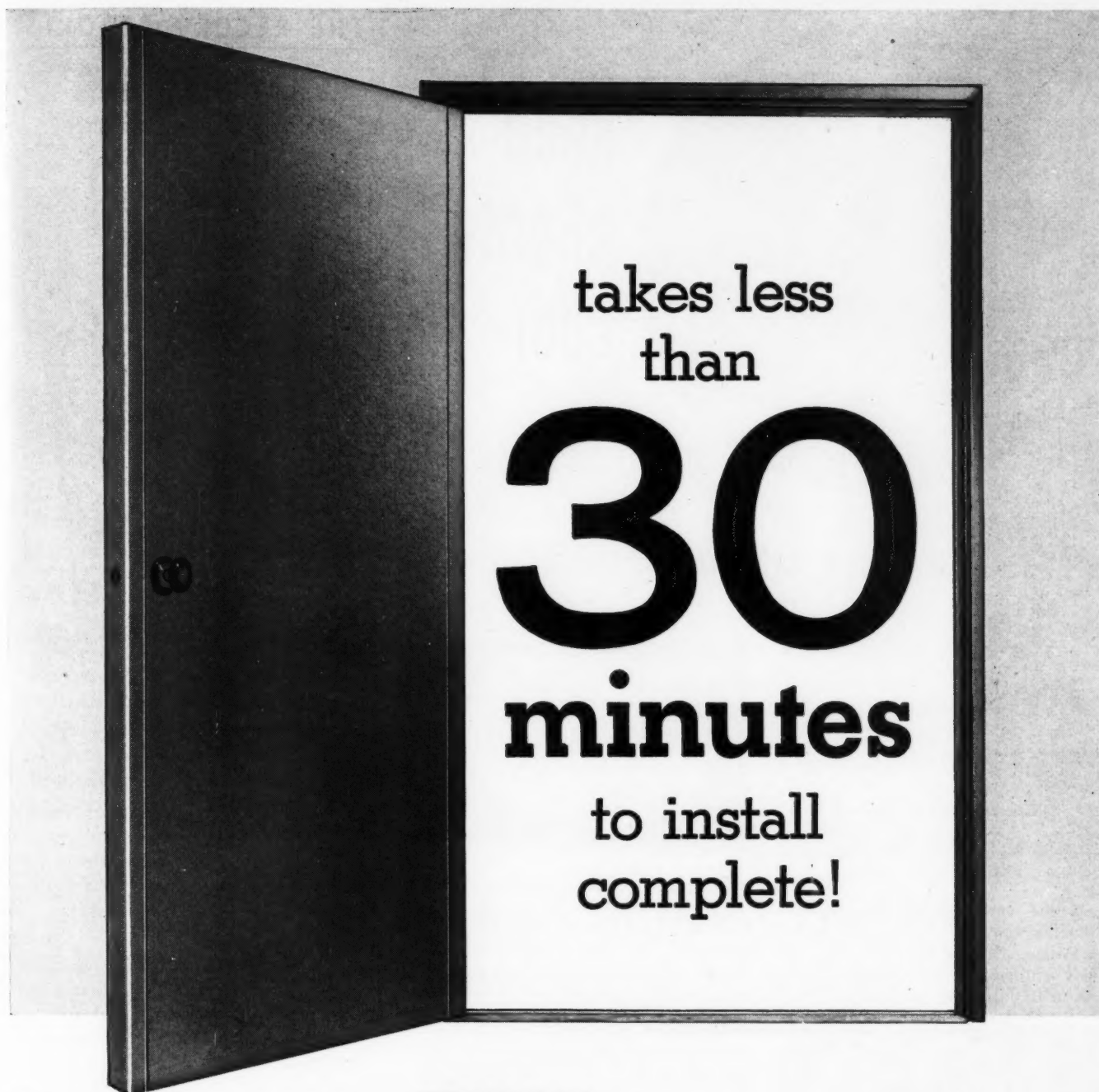
The federal government would rent the completed buildings with payments applicable on a prearranged purchase contract, title turning to Uncle Sam at the end of a specified period which might be from eight to 25 years.

Public Buildings Commissioner W. E. Reynolds feels that such an arrangement has the advantage of hurrying the construction of needed space without the usual drain on federal treasury funds.

It has been estimated that enactment of two measures now before Congress — H. R. 4323 and S. 1621 — would release a backlog of almost \$2 billion worth of

(Continued on page 322)





## the revolutionary new TRULINE aluminum door and frame

This is the remarkable door-and-frame assembly that's opening up a completely new concept in building! Truline is so light, so precisely engineered it takes one man, using only a screw-driver, less than a half-hour to install both door and frame! And there's no painting necessary . . . Truline doors and frames are delivered with a smooth, rich satin finish.

### **No call-backs, either!**

- The Truline door is dimensionally stable aluminum, will not warp, sag, shrink or swell.
- Truline is trouble-free . . . cannot crack, splinter, deteriorate.

- Adjustable frame compensates for wall deviations. Can be installed as last operation in the building.

### **A better sales-maker . . . more modern, more beautiful, more functional!**

- Adds quality that adds to the desirability of a home.
- Honeycomb core gives strength, assures sound and thermal resistance.
- The Truline Weather-sealed door . . . tight as your household refrigerator . . . costs only a fraction as much as a conventionally weatherstripped wood door.

For further information on the Truline door, write to HUNTER DOUGLAS CORPORATION, Riverside, California.



keep  
clients  
cool

## with Hunter attic ventilation

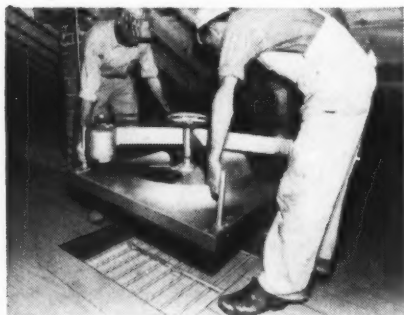
IT'S THE LOW-COST WAY

TO COOL

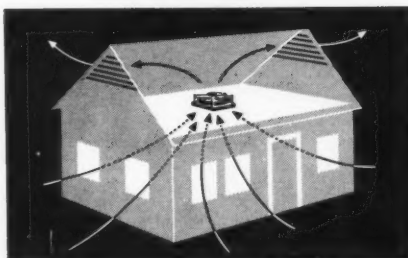
EVERY ROOM IN A HOME

You plan homes for comfort—and no home is comfortable unless it is cool in hot summer months. The low-cost way to cool a home is with a Hunter Attic Fan.

**Cools the entire house**—This modern ventilating fan is a complete home-cooling system. On hot summer days and nights it drives out hot, humid air . . . pulls in fresh, cooling breezes.



The compact Hunter Package Fan is easily installed in any attic.



**Easy to install**—Delivered on the job complete with ceiling shutter and modern metal trim, the Hunter Package Fan is quickly installed in ceiling opening. No suction box or "extras" to build. Fan unit requires only 17" attic clearance.

**Performance guaranteed** — Quiet, dependable operation is assured by Hunter's 65-year experience in fans exclusively. Hunter Attic Fans are available in capacities to fit any home and any climate. Fan guaranteed 5 years; motor and shutter, 1 year.



Write for free  
home cooling  
manual



HUNTER FAN AND VENTILATING CO.

396 S. Front St., Memphis 2, Tenn.

See our catalog in Sweet's

**HUNTER** *Package Attic Fans*

## THE RECORD REPORTS

### WASHINGTON

(Continued from page 320)



"Train your sights on engineering": T. A. Marshall Jr., executive secretary of the Engineering Manpower Commission of Engineers Joint Council; B. G. A. Skrotzki, chairman of the Guidance Committee of Engineers Council for Professional Development; and Andrew G. Clausen Jr., New York City Board of Education president. The poster was sent to all U. S. secondary schools as part of drive to recruit future engineers to relieve the acute manpower shortage in the profession

office building, including post offices, court houses, general federal office structures and similar work.

### Outside Design Expected

The private architect would, in all probability, receive the largest share of the design work in such a new program.

PBS spokesmen said the final details had not yet been worked out, but it was known that Commissioner Reynolds favored a plan whereby his agency first would arrange for financing of the structure, entering a contract for funds. The next step would be preparation of the plans and specifications according to PBS stipulation, whether these are executed in or out of the PBS shop. Then the agency would take competitive bids on the plans.

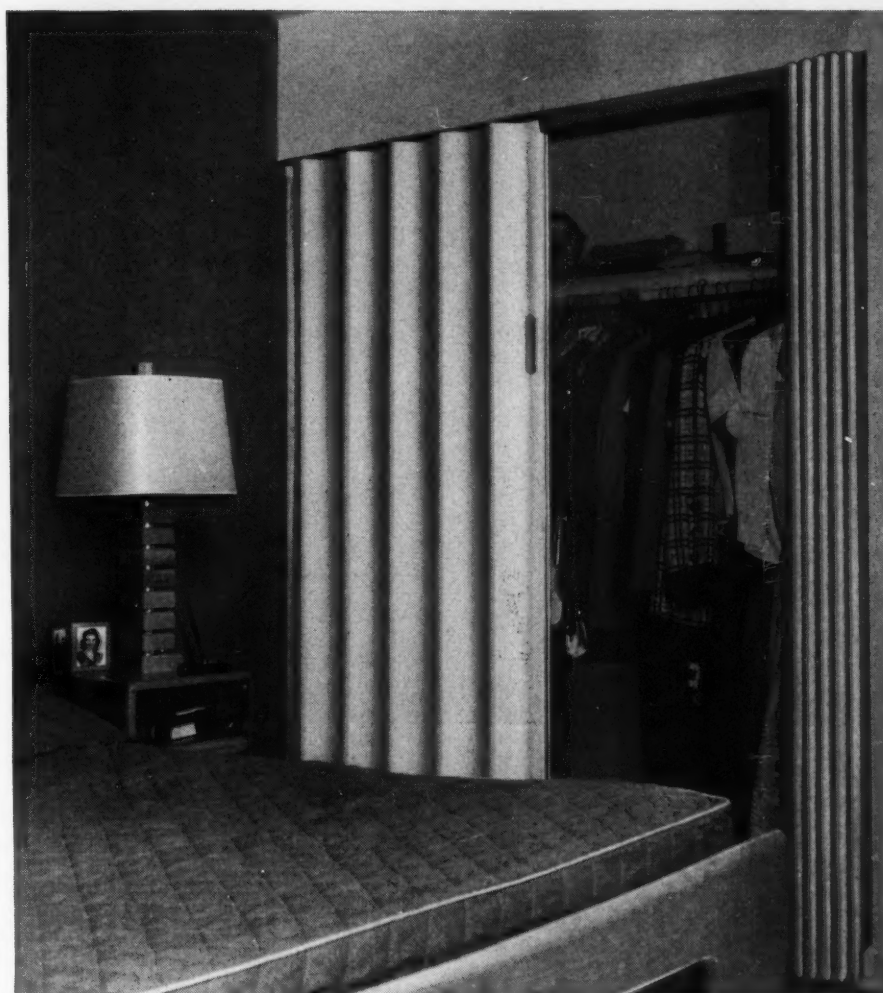
In essence, the plan would amount to the federal government borrowing the money through the best financial

(Continued on page 324)

## When space is at a premium

... space-saving "Modernfold" doors are invaluable. Note how the bed and night stand are placed close to and *in front of* this closet. There's no space wasted on door swing—"Modernfold" doors *fold back on themselves*, completely out of the way.

Architect Leo J. Dworak specified "Modernfold" doors to solve this "space problem" for the Skogman Construction Company, builder of 199-unit apartment projects in Cedar Rapids, Ia. And builder Skogman reports, " 'Modernfold' doors gave us this extra space . . . at no extra cost."



## Your ideas come to life . . . for life with "MODERNFOLD" doors

For every room division or door closure problem, there's a simple, economical, space-saving solution. That's "Modernfold," the original folding door.

Specifying "Modernfold" doors keeps clients happy. For these steel-framed, vinyl-covered doors can't be equalled *anywhere* for quality of design . . . for quality and strength of materials.

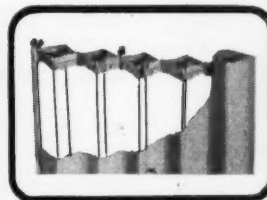
And because this line is *complete*, you're sure to save time and get exactly what you want when you specify better looking, easier operating, longer lasting "Modernfold" doors. For full details, look up our installing distributor under "doors" in your classified phone book or mail coupon.

**Sold and Serviced Nationally**

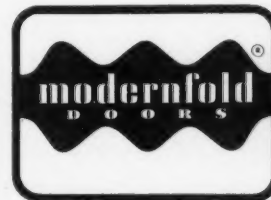
NEW CASTLE PRODUCTS, NEW CASTLE, INDIANA  
In Canada: Modernfold Doors, 1315 Greene Ave., Montreal



**Better Looking**  
Fabric covering conceals all operating mechanism. No cornice needed. Adjustable trolleys keep doors hanging flush to jamb.



**Longer Lasting**  
Balanced hinge construction both top and bottom. Trolleys attached at hinge intersections. No sidewise twist or pull possible.



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Over 100,000 "Modernfold" doors now in operation—a backlog of space engineering experience that's your guarantee of satisfaction.

### YOU CAN'T GET MORE IN A FOLDING DOOR



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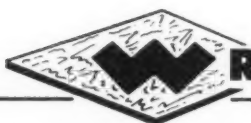
## Help your clients sell more merchandise with **WRIGHT RUBBER TILE!**

In these competitive times, the success of a store depends more on its attractiveness than on any other one factor, and nothing will add more to that attractiveness than Wright Rubber Tile!

Leading architects and designers in all sections of the

country have found that floors of Wright Rubber Tile mean more profits for their clients and more prestige for themselves. Get more information on this outstanding floor covering before you write another specification.

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- WRIGHTEX—Soft Rubber Tile
- WRIGHTFLOR—Hard Surface Rubber Tile
- WRIGHT-ON-TOP Compression Cove Base

3492

## THE RECORD REPORTS

### WASHINGTON

(Continued from page 222)

arrangement it can make, paying the builder for the structure, then paying off the lender over a period of years.

### **Renovations Also Covered**

The proposed legislation has a provision to cover used structures as well as new ones. This would permit PBS to buy standing buildings and renovate them to its own liking, paying for the purchase and the remodeling work over a period of years.

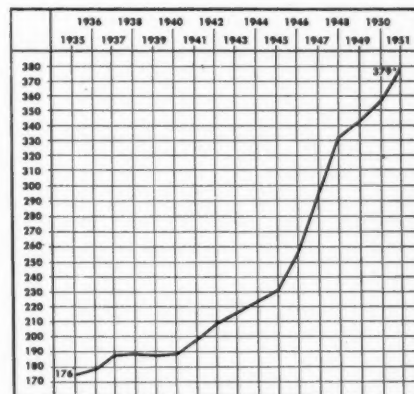
Under present laws, the federal government can only build its own structures, buy them or lease on a yearly basis for indefinite periods of time. Building calls for large fiscal outlays which Congress often is reluctant to provide. Renting over the years eats up money at a rate which not infrequently covers the entire value of the rented structure several times over.

The two bills now up for consideration have been reported out of their respective committees, but no schedule has been set for floor action.

### **Committee Report Favorable**

In reporting the House measure, the Committee on Expenditures in the Ex-

(Continued on page 326)



### **BUILDING COST INDEX**

Chart above was provided by Security Insurance Company of New Haven from figures supplied by U. S. Department of Commerce and based on Associated General Contractors of America reports. 1913=100



## "25,000 People out here on Sunday..."

"G-E Year 'Round Air Conditioning in our \$12,500 homes caused tremendous opening March 23. Other builders showing great interest in this development. Public interest so good it's hard to believe."

Laughlin & Silver, Lewis & Lamberth, Builders, Dallas, Texas

**AMAZING SUCCESS STORIES** like this will be repeated more and more often all over the country. Reason: General Electric has found the way to offer architects and builders summer cooling for the homes they build...at *low cost*. It's the year 'round comfort more and more home buyers will demand.

**NO EXTRA COST TO BUILDERS!** Buyers pay only a few dollars per month extra over the cost of a warm air heating system alone when cost is included in a long-term mortgage. Builders all over the country have proved that homes equipped with G-E Air Conditioning *sell faster!*

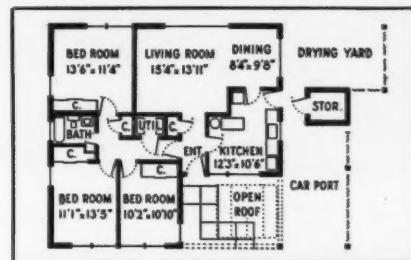
**FLEXIBLE INSTALLATION.** Any size home you build, no matter what the price range, can be equipped with G-E Home Air Conditioning. It can be installed in homes with and without basements with the famous G-E *Air-Wall System*, using for heating the new gas-fired Downflow or Horizontal Furnaces, or standard G-E gas- or oil-fired furnaces.

**BUILDERS! ARCHITECTS!** Your reputation for quality can grow because your customers will have these dependable G-E comfort benefits:

- ★ Summer cooling
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- ★ Dehumidification
- ★ Automatic comfort
- ★ Quiet, clean comfort

*You can put your confidence in—*

**GENERAL  ELECTRIC**



LITERALLY "BUILT AROUND" the G-E Home Air Conditioning System, this is one of the plans of 210 new homes in East Ridge Park, Dallas, Texas. Note the small space required by the compact G-E Furnace and Home Air Conditioner.



**SMALL HOME REVOLUTION** is pointed out in new home by John B. Lowe, President of G-E's wholesaler in Dallas, Texas Distributors, Inc. Architect for homes was George M. Marble; Builders, Lewis & Lamberth and Laughlin & Silver.

**FREE**



General Electric Co.  
Air Conditioning Div.  
Sec. AR-7  
Bloomfield, N. J.

Please send me **FREE** information on G-E Year 'Round Air Conditioning.

NAME .....

COMPANY .....

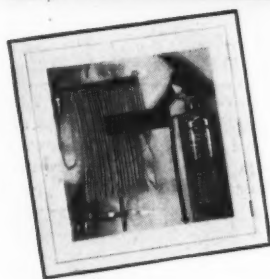
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CITY ..... ZONE ..... STATE .....



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CHICAGO 6 • NEW YORK 7

## THE RECORD REPORTS

### WASHINGTON

(Continued from page 324)

ecutive Departments said:

"The provisions of the bill would enable the federal government to acquire office and other space under private-construction programs at low rates of interest over an extended period within appropriations to federal agencies now provided for the payment of rent.

"Its enactment would tend to eliminate high recurring rents necessary under present short-term lease contracts.

"Private investment firms, insurance companies, and local banking institutions would be encouraged to provide necessary construction funds under such a guaranty against loss and assurance of a fair return on investments over an extended period of years.

"Another advantage is that properties involved would continue to be subject to taxes during the period of such leases. The government would recover much of these investments through acquisition of title to the properties under contract at the expiration of the lease period."

The government now is competing with private enterprise for space at increasingly high rentals, it was pointed out.

### Office Space Badly Needed

Congress is aware that office building construction has not kept pace over the recent years with increases in population and economic activity. And with the existing high cost necessary to build such structures, private enterprise has been reluctant to go ahead with new construction. Thus, the backlog of need accumulates.

Commissioner Reynolds cited these facts in his request to the committees for favorable action on the bills. Perhaps the post offices requirement predominates in number, but there is also a great need for general office building space.

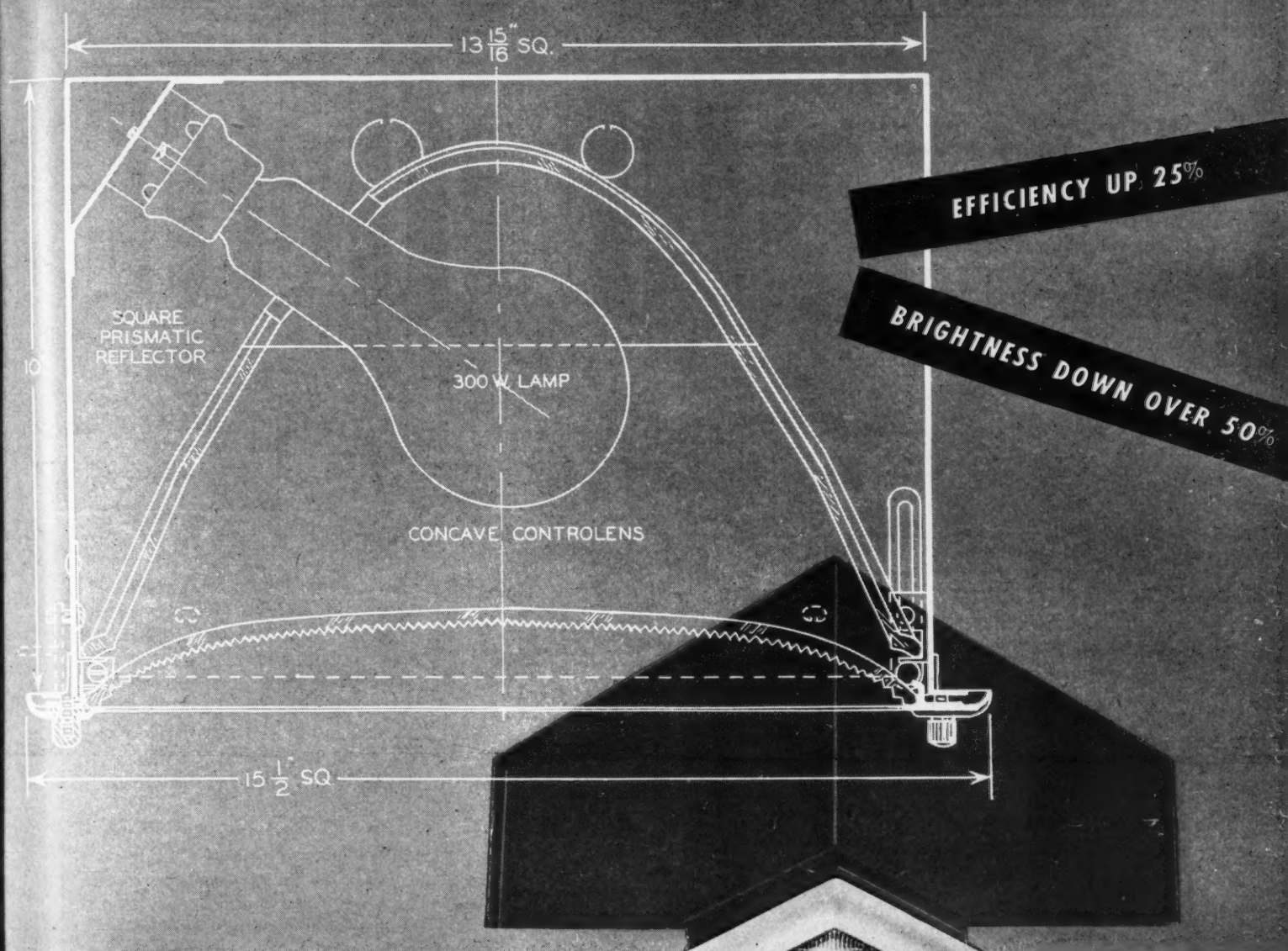
### Post Offices: New Type

In connection with the post office space shortage, Mr. Reynolds said that at the present time a surprising increase in parcel post volume has placed a terrific strain on facilities. In many

(Continued on page 328)



# HOLOPHANE DEVELOPS AN ENTIRELY NEW CONCEPT IN LIGHTING



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BRIGHTNESS DOWN OVER 50%

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OFFICES  
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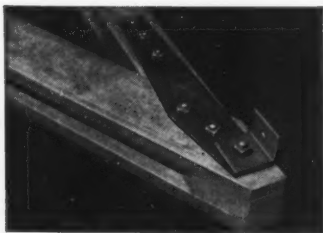
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THE HOLOPHANE COMPANY, LTD., THE QUEENSWAY, TORONTO 14, ONTARIO

\* Trademark

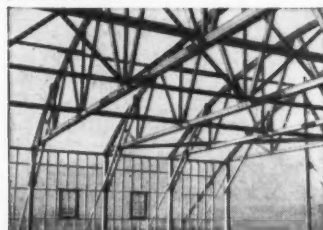
## THE RECORD REPORTS

(Continued from page 326)

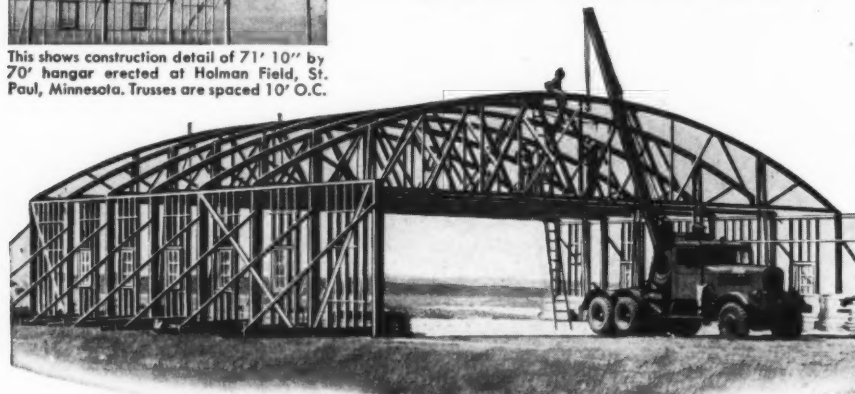
places the postal service is working mails off the platforms; a time-consuming operation made necessary by the lack of adequate inside storage. The trend now is to construct working post offices on railroad locations, placing finance p. o. buildings uptown. The older huge all-purpose structure appears to be doomed.



Necessary hardware items for base and crown connections are furnished with trusses. Connections are engineered to handle computed reactions.



This shows construction detail of 71' 10" by 70' hangar erected at Holman Field, St. Paul, Minnesota. Trusses are spaced 10' O.C.



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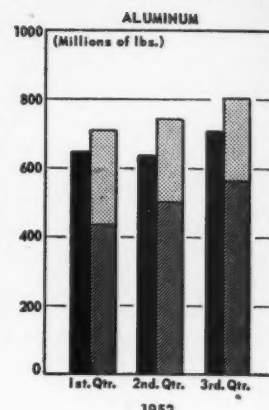
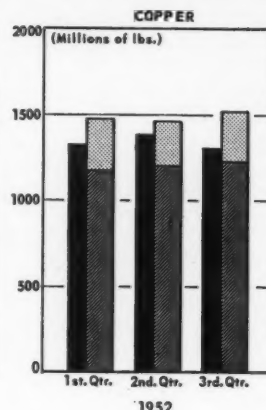
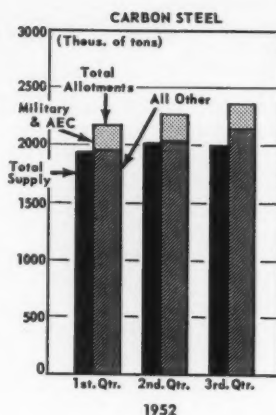


Chart from Charles E. Wilson's Fifth Quarterly Report illustrates increased CMP allotments for third quarter of 1952

### Addenda

- Hearings before the Jones House subcommittee (a Public Works sub-unit) revealed that the Army Corps of Engineers' civil works program now includes more than 3000 authorizations and projects for navigation, flood control and multiple purposes. Estimated cost of these improvements, overall, is placed at \$16.7 billion by the Corps.

- Latest developments in the building line will be shown by scores of exhibitors in the Canadian International Trade Fair opening at Toronto June 2. Reports from Fair headquarters tell of greatly increased interest in the later technological developments in construction products. Canadian exhibitors alone have more than doubled last year's exhibit space.

### ON THE CALENDAR

May 1-2: Middle Atlantic Regional Conference, the American Institute of Architects — Bellevue-Stratford Hotel, Philadelphia.

May 3-11: New England Home Show, sponsored by Home Builders Association of Greater Boston — Mechanics Building, Boston.

May 5-16: British Industries Fair — Earls Court and Olympia, London; Castle Bromwich, Birmingham, England.

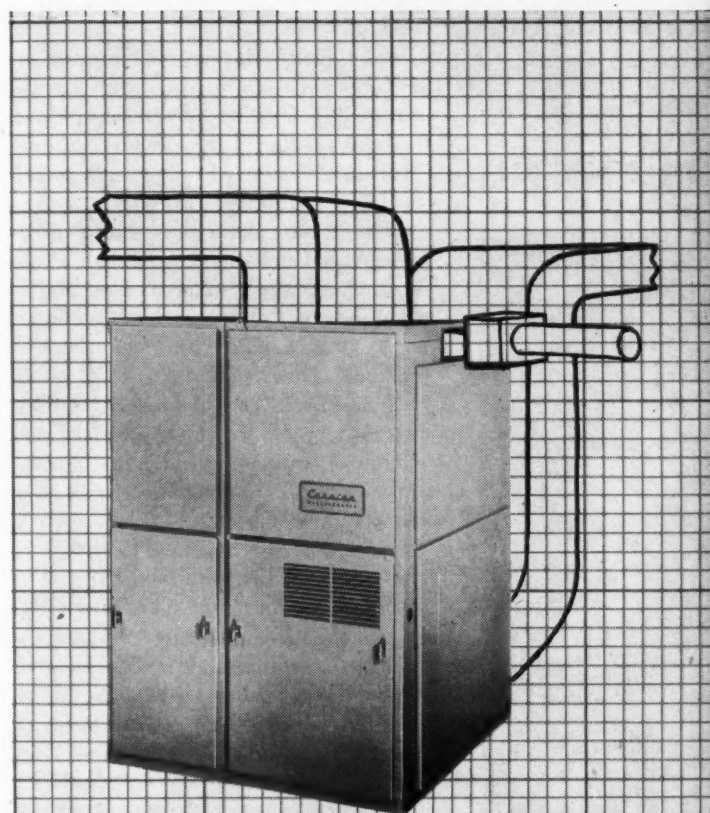
May 6: A concert of rarely performed French music; 11th of 12 evenings on "The Related Arts of Today" sponsored

(Continued on page 330)



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It's the Carrier Weathermaker Air Conditioner. With it you can design better homes for your clients...Carrier Weathermaker Homes.



*The Carrier Weathermaker is designed for a duct system like that used for forced warm air heating. The Weathermaker Cools and heats. It burns gas for heating and uses a sealed electric refrigerating unit for cooling. It is only a little larger than an ordinary furnace.*

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You have more freedom in choosing exposures and orientation in a Weathermaker Home. You can face the house as you normally would and get a bonus in the form of lower cooling and heating costs. Or you can let the Weathermaker give you a practical solution to a view to the west.

## windows and walls

You have more freedom to group windows, more freedom to place them as you will on the walls in a Weathermaker Home. You don't have to compensate for glass with louvers or other halfway measures. You can leave windows off one wall or more without worrying about cross or through ventilation. You can use solar heating in the winter, and still know that the Weathermaker will keep those rooms cool in the summer.

## interiors

You have more freedom to arrange the interior living zones for comfort and convenience in a Weathermaker Home. You don't have to place doors in relation to windows. Interior bathrooms become highly practical. Windowless walls gain space for storage. But all this is only a starter. We're sure that you can design new and wonderful homes that may even cost less including the Weathermaker than traditional designs.

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## THE RECORD REPORTS

(Continued from page 328)

by the Junior Council — Auditorium, Museum of Modern Art, 11 W. 53rd St., New York City.

May 6-9: Fourth International Lighting Exposition and Conference — Cleveland Municipal Auditorium, Cleveland, Ohio.

May 6-9: Annual Meeting, Scientific Apparatus Makers' Association — Edgewater Beach Hotel, Chicago.

May 7-July 6: New Talent; fourth in

series of exhibitions of work by artists who have not had major shows in New York — Museum of Modern Art, 11 W. 53rd St., New York City.

May 19-24: First Annual International Churchman's Exposition, including architectural exhibit — National Amphitheater, Chicago.

June 1-4: Annual Meeting, American Society of Heating and Ventilating Engineers — Atlanta, Ga.

June 2-5: National Plumbing and Heating Exposition, sponsored by the National Association of Master Plumb-

ers — Convention Hall, Atlantic City, N. J.

June 7: Annual Meeting, Indiana Society of Architects — Construction League, Indianapolis.

June 9-21: Triennial Meeting, International Organization for Standardization; American Standards Association, host — Columbia University, New York City.

June 11-26: 12th Antique Dealers' Fair and Exhibition — Great Hall, Grosvenor House, Park Lane, W. 1 London.

June 16-21: Special course in architectural acoustics — Massachusetts Institute of Technology, Cambridge, Mass.

June 23-25: Sixth Annual National Meeting, Forest Products Research Society — Milwaukee, Wisc.

June 23-24: Fourth National Businessmen's Conference on Urban Problems, sponsored by the United States Chamber of Commerce and the Portland, Ore., Chamber of Commerce — Portland, Ore.

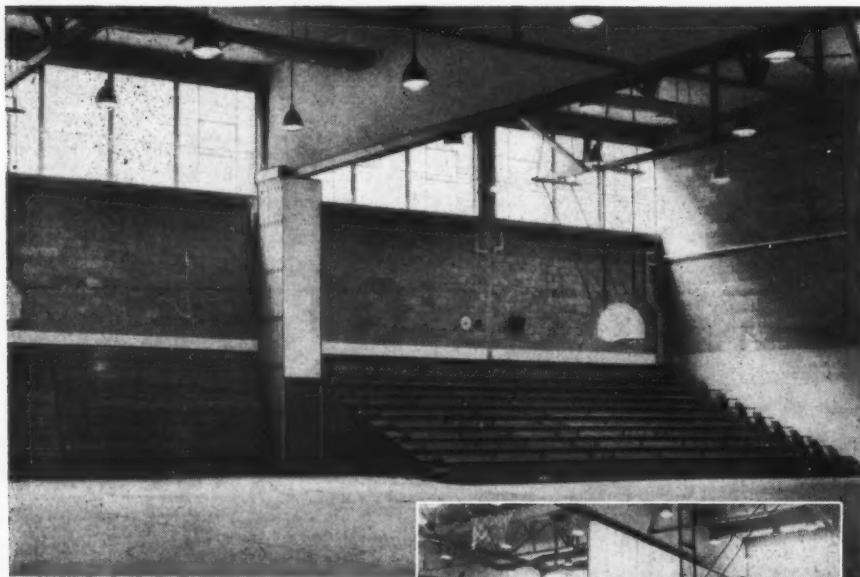
June 23-27: Annual Meeting, American Society for Testing Materials, and exhibit of testing apparatus and laboratory supplies — Hotels Statler and New Yorker, New York City.

June 24-27: 84th Annual Convention, the American Institute of Architects — Waldorf-Astoria Hotel, New York City.

June 25: Crossroads in Architecture; last of 12 evenings on "The Related Arts of Today" presented by the Junior Council — Auditorium, Museum of Modern Art, 11 W. 53rd St., New York City.

July 10-11: Annual Indiana and Midwest School Building Planning Conference, sponsored by the School of Education, Indiana University — Indiana University, Bloomington, Ind.

## flexible GYMNASIUM PLANNING



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### OFFICE NOTES


#### New Offices

• W. F. Calongne, Jr. announces the opening of his office for the practice of architecture at 232 Humble Bldg., 909 S. Jefferson Parkway, New Orleans, La.

• Leo A. Daly Company, Architects and Engineers, announces the opening of a west coast office in Seattle, 706 Securities Building. Gilbert H. Mandeville is manager of the new office.

• Daniel, Mann, Johnson & Mendenhall, Architects and Engineers, have opened

(Continued on page 332)



# BUILT

*To Serve In The Finest*

# BUILDINGS

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**NIBROC TOWELS** are the world's largest-selling towels for industrial and institutional use. They are soft, lint-free, highly absorbent, and unusually strong when wet. Economical, too, because fewer are used.

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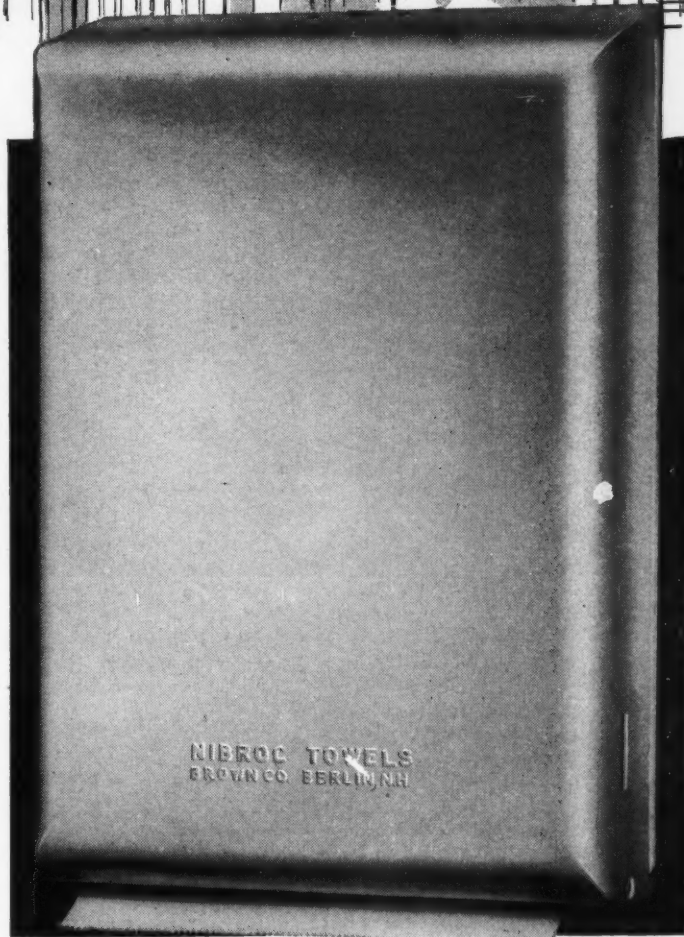
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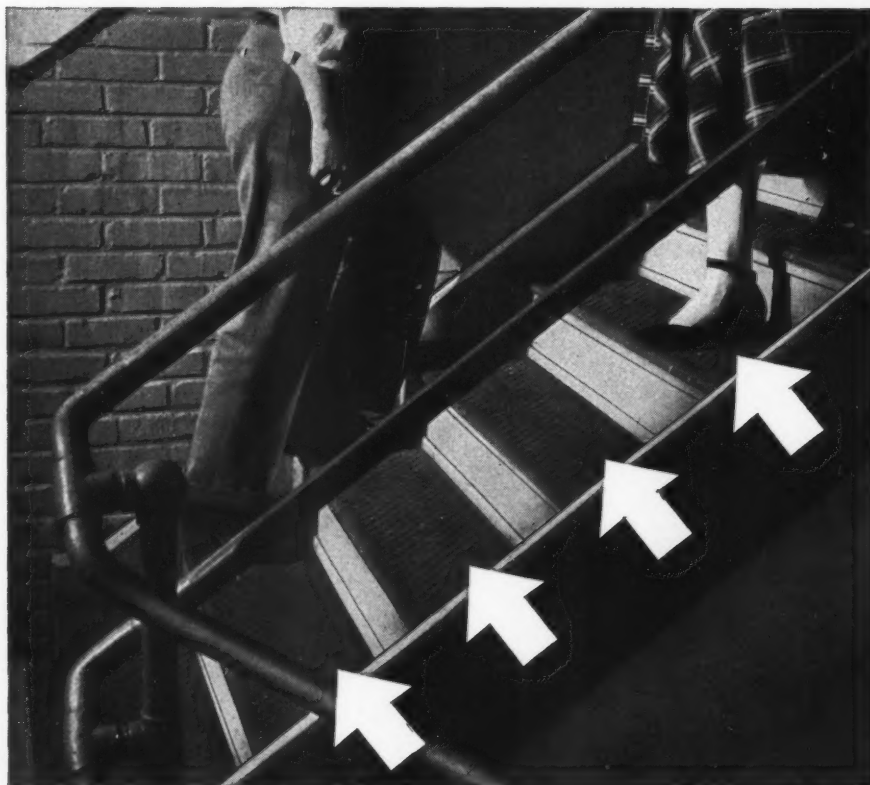
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A special cast iron matrix with a diamond-hard abrasive imbedded in the walking surface. That's the Feralun secret of safety. The abrasive, *not* the scoring, provides secure footing—wet, oily or dry. • That's why you will find Feralun underfoot, wherever traffic is heaviest. For over a quarter of a century, millions of feet of Feralun treads, floor plates and thresholds have been used in subways, railway cars, buses, factories, office and public buildings, even on battleships. This extra-safe, extra-durable flooring will last the life of the structure. Don't slip up on safety! Look into the facts and figures on Feralun.

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## THE RECORD REPORTS



Abraham & Straus has opened its new suburban department store in Hempstead, L. I., with the announced intention of making it "the largest and most complete suburban department store in the northeastern United States." The three-story building contains 236,000 sq ft, has nine acres of parking area on three sides. Exteriors are dimpled brick. The Austin company were engineers and builders; Marcel Breuer consulting architect on exteriors; Peter Copeland Associates and the firm of Daniel Schwartzman, architects on interiors

(Continued from page 330)

a new Los Angeles office at 4201 Sunset Blvd., Los Angeles 29, Cal.

• Paul Rudolph announces the opening of a new office for the practice of architecture and design at 542-B Main St., Sarasota, Fla.

The RECORD regrets having erroneously reported Mr. Rudolph recalled to active service in the Navy (March 1952, page 26). Mr. Rudolph's orders were cancelled a few days before they were to become effective.

• George W. Short, formerly associated with Walsh & Hazelwood of Amarillo, has opened offices for private practice at 816 Harrison, Amarillo, Tex.

• Associated Architects Milton Wirtz, Harold Calhoun, Mace Tungate, R. Graham Jackson and Frank Dill announce the opening of new offices at 2506 Richton, Houston.

(Continued on page 334)





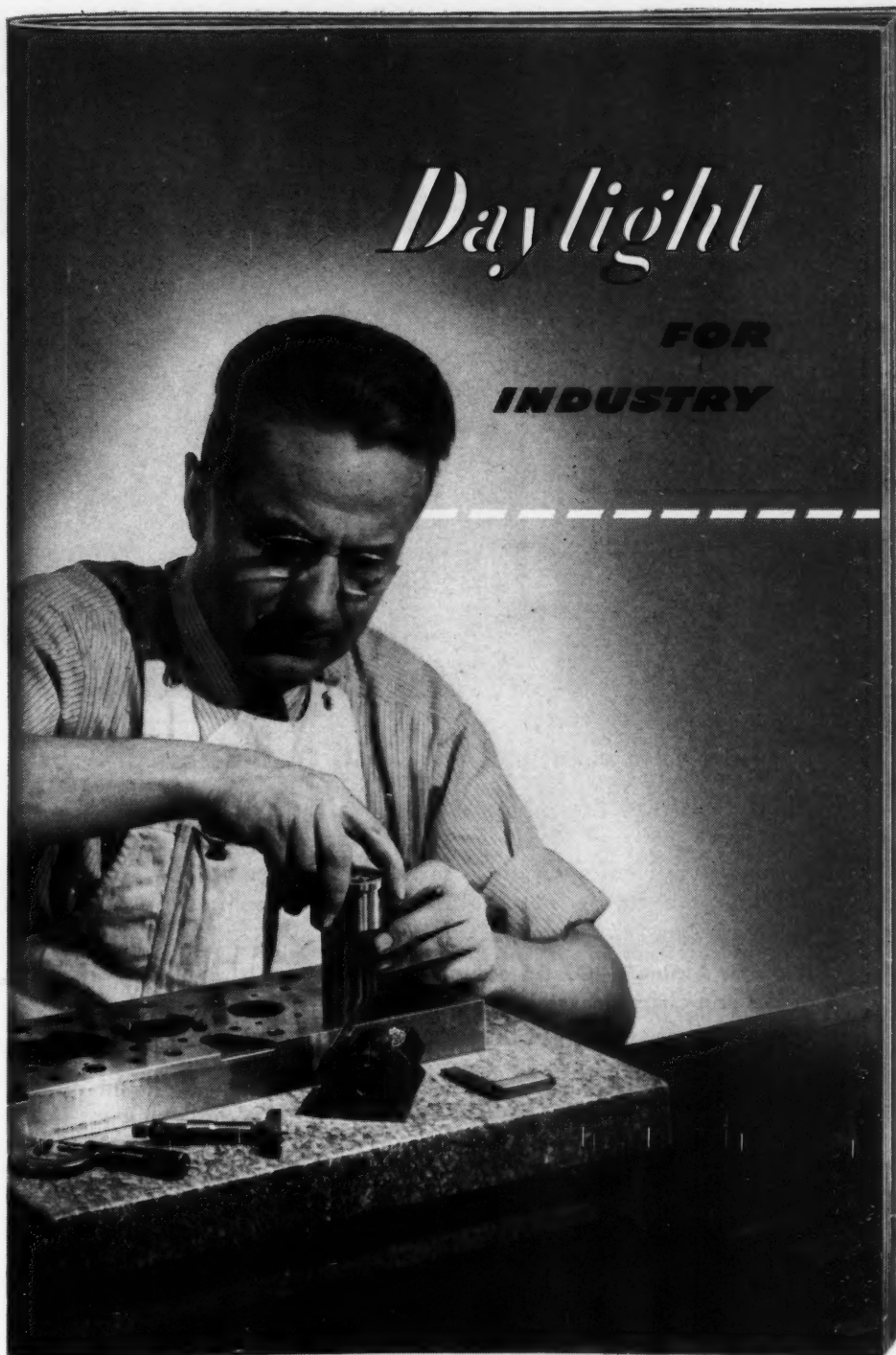
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Here's a new booklet with the latest information on plant daylighting. If you're concerned with lighting, it should be "must reading." Nontechnically written, in easy-to-read form, "Daylight for Industry" brings you all of the important facts and fundamentals of daylight control.

**Send for your copy now.** See how you can make daylight do a maximum indoor lighting job... see how you can use an Insulux Fenestration System with Insulux Light-Directing Glass Block to assure better daylight for occupants and reduced operating cost for owners. *Insulux Division, American Structural Products Company, Toledo 1, Ohio. Subsidiary of Owens-Illinois Glass Company.*

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**GLASS BLOCK**

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Ozalid in Canada—Hughes Owens, Ltd., Montreal.

## THE RECORD REPORTS

(Continued from page 332)

### New Firms, Firm Changes

• Crowell and Lancaster, Architects, of Bangor, Me., and Ambrose S. Higgins, Architect, of Bar Harbor, Me., announce the merger of their two firms to form Crowell, Lancaster and Higgins, Architects, 6 State St., Bangor, Me.

• Arthur E. Hassler, formerly with the Tidewater Oil Co., is now affiliated with Serop S. Nersesian Associates, consulting engineers. The firm is moving to larger quarters at 398 Main St., Hackensack, N. J.

• Reisner & Urbahn, Architects, of New York, have announced the addition to the firm of John Jansson, A.I.A., who will be in charge of the school planning department.

• Donald L. Hardison, Architect, of Richmond, Cal., has announced formation of an associateship with Harry B. Clausen and S. Richard Komatsu.

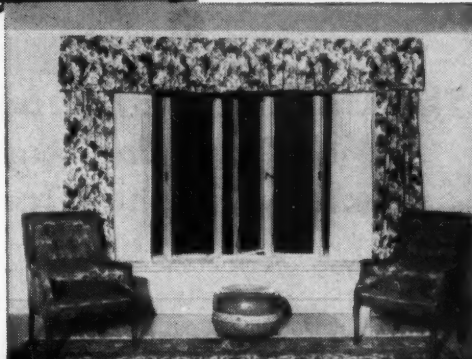
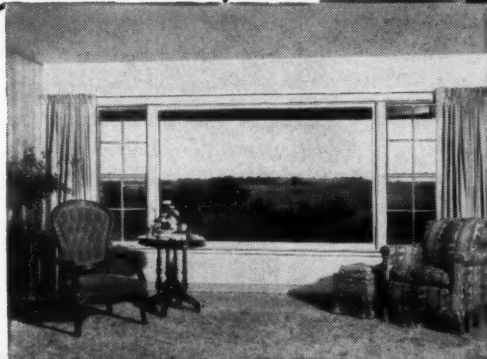
• E. A. Schiewe, Architect and Engineer, of Park Ridge, Ill., has been ap-

(Continued on page 336)



Sculptor Berta Margoulies looks over her 16-in.-high bronze of a woman protecting two children—a piece with an unusual destiny. It will be given to the woman winning top honors in the Carol Lane Traffic Safety Award recently established by Shell Oil Company and administered by the National Safety Council. It was created with its destination in an average home in mind and suggests a new way of getting works of art into everyday surroundings.

.....  
**you can build**  
**REPUTATION, too**  
**with**  
**SILENTITE WINDOWS!**



.....  
 Window troubles do not enter the homes which are equipped with Curtis Silentite windows. Owners don't complain of windows that let in drafts or allow precious heat to leak out. There's no sticking—no rattling, and operation is easy—always. No wonder so many builders throughout the country put these wood windows *first* in preference.

No other window can duplicate the patented "floating" weather-strip construction of Silentite double-hung windows—the special Curtis weather protection at head, meeting rail and sill. And no other casement has *all* the features which have made Curtis Silentite casements known as the most weathertight casements manufactured today.

Available in wide variety—and as completely pre-assembled units—Curtis Silentite windows cut installation time and assure complete owner satisfaction. Nationally advertised for more than twenty years, Silentite is America's best known window. It will help you maintain profits—and reputation, too. For more information, mail the coupon!



Curtis Companies Service Bureau  
 AR-5 Curtis Bldg., Clinton, Iowa

Gentlemen:  
 I want to know more about Curtis Silentite Windows. Please send me your free window booklet. I am ☐ Contractor, ☐ Architect, ☐ prospective home builder, ☐ student. (Please check above)

Name.....

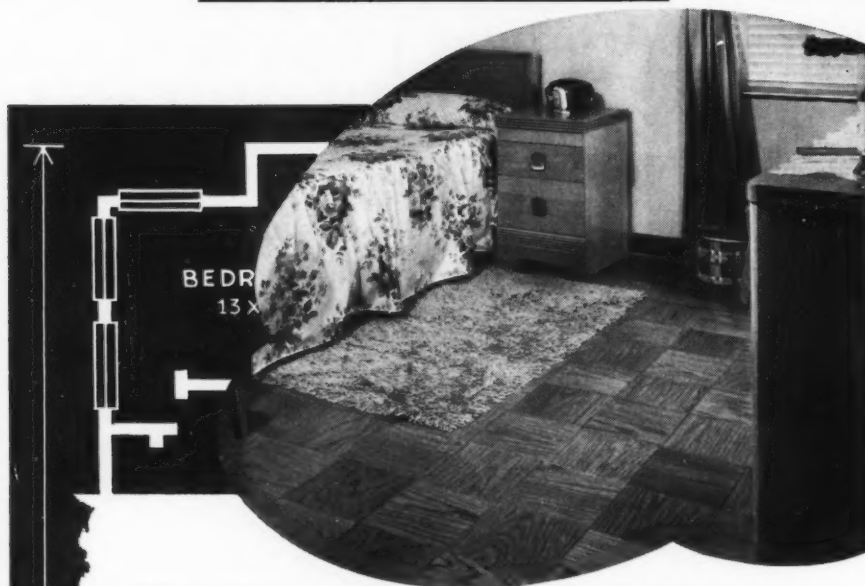
Address.....

City.....State.....



# Smart "FLOOR" PLANS

## FEATURE PARKAY



### The Genuine Hardwood Flooring 3/16" Thick for Economy — Factory Finished for Beauty

Parkay gives you smart styling at substantial savings. This genuine hardwood flooring is only 3/16" thick—conserving costly material without sacrificing wearing surface; permitting use with other resilient floor materials, without changing floor levels.

Parkay is factory finished, assuring a lasting lustre and richness that would be difficult and costly to duplicate on the job. It is applied with Parkay Adhesive over any smooth, sound subsurface—wood or cement. Once down, it's ready for immediate use—a beautiful and enduring hardwood floor that costs little or no more than ordinary strip finished on the job.

Parkay flooring of choice American Oak is offered in 9" x 9" Tiles and 9" wide Broadboard in random lengths. Both may also be used to produce attractive paneled walls. See Sweet's Architectural File or write direct for free literature and sample. Parkay, Incorporated, Dept. R, Louisville 9, Ky.



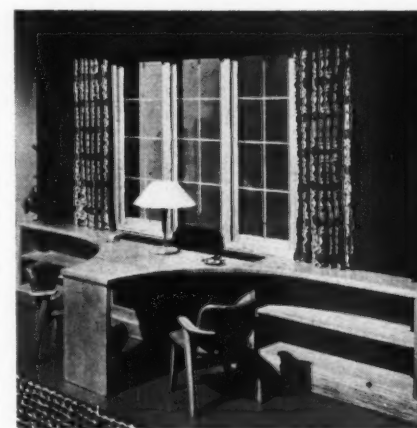
# PARKAY

READY-FINISHED HARDWOOD  
FOR FLOORS AND WALLS

## THE RECORD REPORTS



Photographs above and below show a typical double room in Shepard Hall, new women's dormitory now under construction at Northwestern University. The photos were made from a model, drawn to scale and built by Holabird and Root and Burgee, architects of the building. The plan for the bedrooms, each about 12 by 15 ft, was the result of long study to combine most possible open space with adequate study and storage space



(Continued from page 334)

pointed head of the Construction Department of Swift and Company.

- A partnership has been formed by Joseph Tuchman and Gordon W. Canute for the practice of architecture. The firm has offices at 47 South Portage Path, Akron, Ohio.

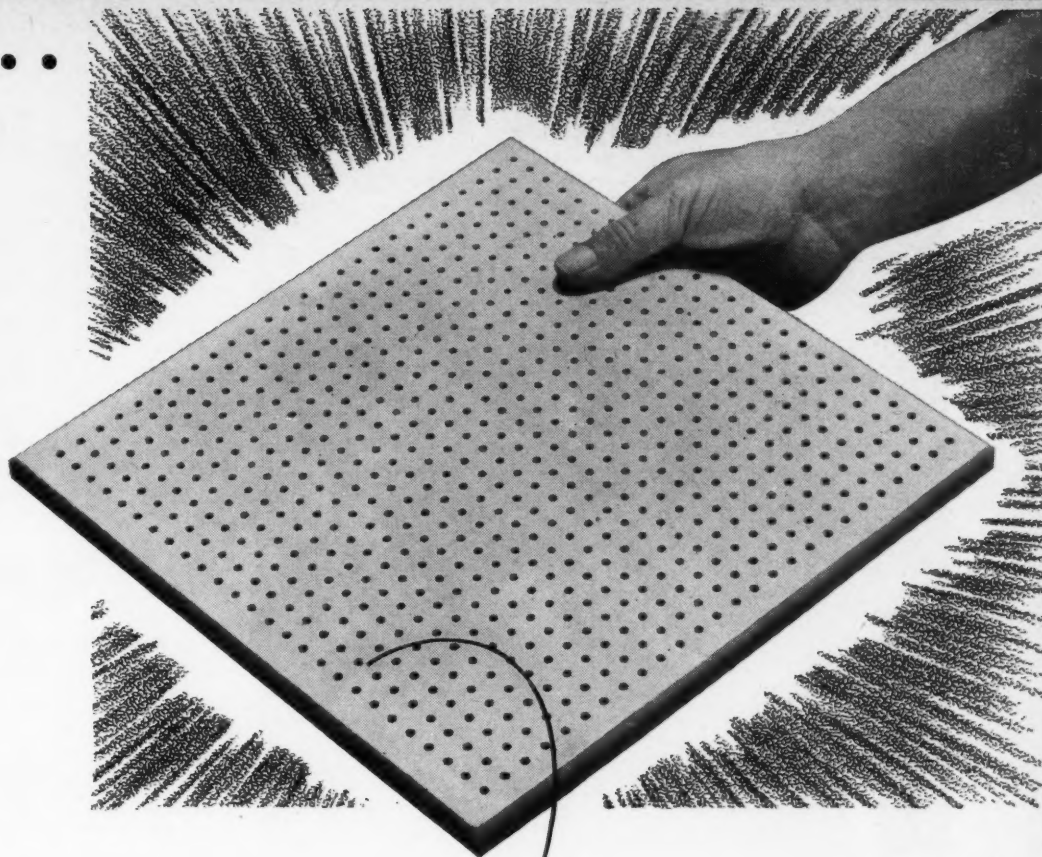
### New Addresses

The following new addresses have been announced:

Vern E. Alden Company, Engineers,  
(Continued on page 338)

# Introducing . . .

## **A NEW INCOMBUSTIBLE ACOUSTICAL PRODUCT**



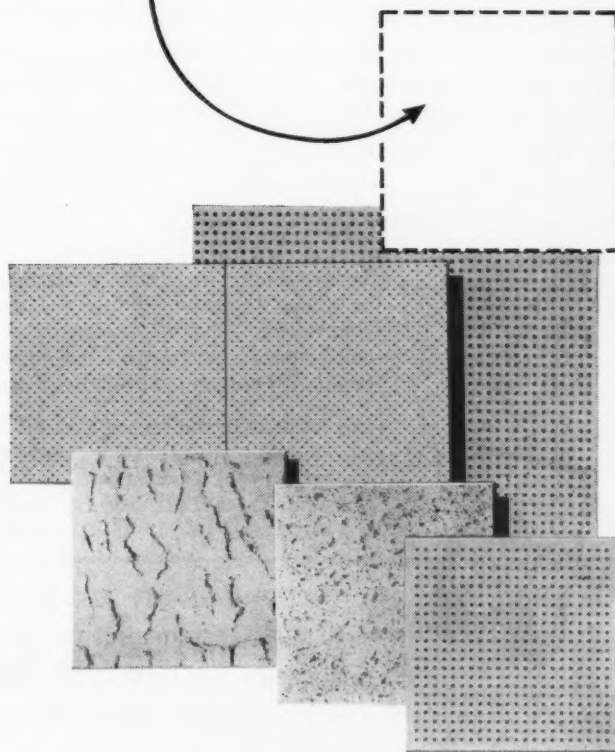
### **ARMSTRONG'S MINATONE**

Armstrong's Minatone\* is a new perforated acoustical tile made of incombustible mineral wool. In addition to complete fire safety, Minatone offers high sound absorption, particularly of irritating high-pitched noises—and a surface that's washable and repaintable.

The smooth attractive surface of Minatone is finished with two coats of latex paint on both face and bevels. Its surface has 676 perforations and is high in light reflection. Armstrong's Minatone is light in weight and can be quickly installed by cementing.

With the addition of Minatone, Armstrong's Line of acoustical materials becomes one of the most complete in the acoustical field. Each Armstrong material offers its own special characteristics such as fire resistance, acoustical efficiency, beauty, moisture resistance, insulation value, and light reflection. This enables you to meet the demands of any acoustical job. Your Armstrong Acoustical Contractor is ready to give you valuable help in selecting materials and solving acoustical problems. For free booklet, "How to Select an Acoustical Material," write Armstrong Cork Company, 2405 Stevens Street, Lancaster, Pa.

\*T.M. APPLIED FOR



## **ARMSTRONG'S ACOUSTICAL MATERIALS**



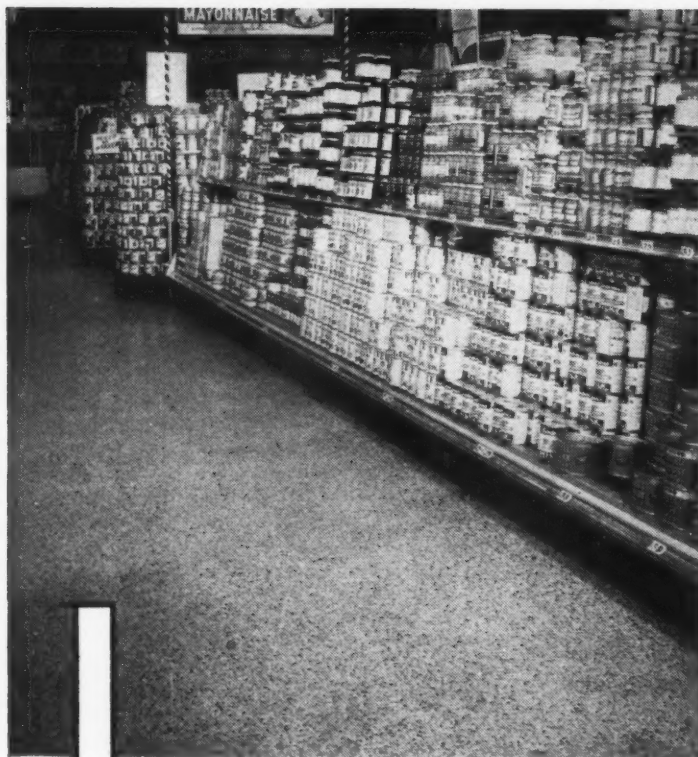


Photo shows Food Fair Market in Philadelphia.  
Architect: Louis Kasoff.  
Terrazzo contractor: United Marble Co. Both of Philadelphia.

# Beautiful terrazzo

*An aristocrat that works in supermarkets*

Does a Terrazzo floor in a supermarket surprise you? It shouldn't, because not only is Terrazzo beautiful, but also its low annual cost prompts the choice.

The designer reasoned: heavy foot-traffic grinds the life and beauty out of most market floors. Terrazzo floors are known for long service life. They require virtually no maintenance and are easy to clean. What's more, Terrazzo stays beautiful throughout its long, long life. All this made "dollars and sense" to management . . . and also made Food Fair Market floors, such as the one above, an important part of their attractive interiors.

Terrazzo offers the architect a spectrum of color, unlimited design possibilities. Made with a true white cement, like Atlas White, any desired color and shading can be produced. In short, Terrazzo gives *practical* beauty for commercial-building floors or any other.

For more information see SWEET'S Catalog, Section 4g/Uni and 13f/Un, or write Atlas White Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), 100 Park Avenue, New York 17, N. Y.



FOR BEAUTY AND UTILITY  
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FOR TERRAZZO, PAINT, SLABS, STUCCO

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Sunday Evenings—NBC Network

## THE RECORD REPORTS

(Continued from page 336)

American National Bank Bldg., 33 N. LaSalle St., Chicago 2, Ill.

Robert E. Alexander, 2379 Glendale Blvd., Los Angeles 39, Cal.

Oscar J. Arnemann, Architect, 589 Newark Pompton Turnpike, Pompton Plains, N. J.

Charles Aspier, Architect, Louis and Aspier, Architects, 4147 Sherbrooke St. W., Westmount 6, Quebec, Canada.

Richard O. Blodgett, Architect, 251 Kearney St., San Francisco 8, Cal.

Fordyce-Hamby-Strobel & Panero, Architects, 70 W. 40th St., New York City.

Leon and Lionel Levy, Architects, 158 E. 35th St., New York 16, N. Y.

### A.I.D. CONFERENCE HEARS HUDNUT CALL TO SERVICE

The 21st annual conference of the American Institute of Decorators, assembled at the Waldorf-Astoria Hotel in New York March 26-30, reflected a healthy consciousness of the architect's increasing concern with the field of interior design; and more important, the public's increasing awareness of the architect's usefulness in that field.

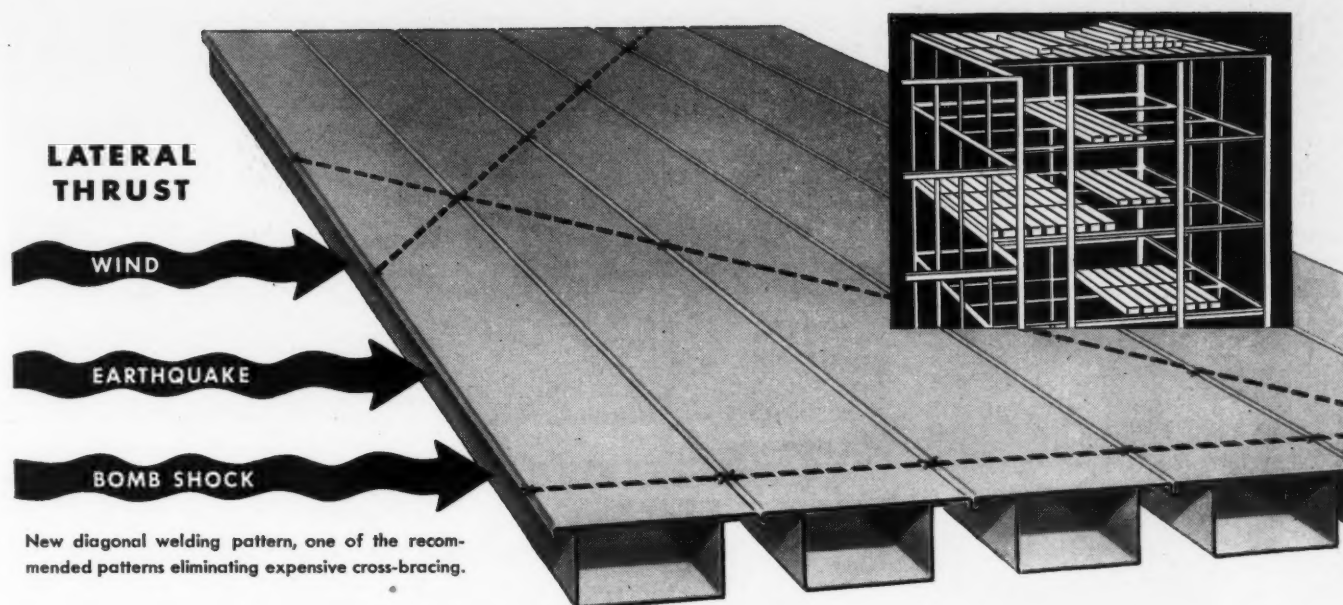
"Think of yourselves as interior designers, not decorators" was a piece of advice given again and again; one speaker even said bluntly that it would be prudent to "watch" the tendency of clients to "cling to" their architects for interior design as well as building design.

(Continued on page 340)



Joseph Orendorff, acting head of the Division of Housing Research of the Housing and Home Finance Agency since the resignation of Richard U. Ratcliff last summer, has now been appointed director





## NEW...TO HELP YOU ACCURATELY DESIGN PANEL FLOORS FOR EARTHQUAKE... WIND AND BOMB-RESISTANCE...

By using Fenestra's\* cellular sheet steel "D" and "AD" Building Panels or Holorib Roof Deck, following the methods given in Fenestra's "Seismic Building Design" brochure, you can stiffen your buildings against earthquake, wind and bomb shock. You can thus take full advantage of another asset of light-gauge steel construction and save building time, labor, materials and money.

Fenestra Metal Building Panels form combination floors and ceilings, or ceilings and roof. And after exhaustive tests in earthquake-conscious Southern California, Fenestra and consulting engineers have developed a design method that enables you to take full advantage of the diaphragm action of Fenestra Building Panels and predict behavior under given

loads. You can get complete details on Fenestra Diaphragm Design from the free booklet offered in the coupon at the bottom of this page.

Multi-purpose Fenestra Building Panels cut the cost of building. The long-span, structurally strong units interlock easily and quickly by male and female joints and are speedily welded into a continuous deck plate. They save time and labor on the site. And their diaphragm action is tremendously important in view of today's need for buildings with bomb-shock resistance.

Approved by the Pacific Coast Building Officials Conference. For full information on the Fenestra Lateral Diaphragm Design Formula, send the coupon below. Or call your Fenestra Representative.

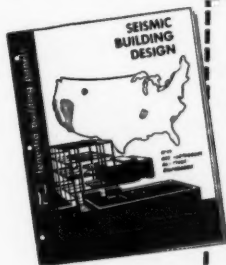
\*Trademark

## *Fenestra* METAL BUILDING PANELS ...engineered to cut the waste out of building

### Full Information—FREE BOOK

Covers the complete design story, including:

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- Summary of results.
- Design method and example.
- Detailing the diaphragm.
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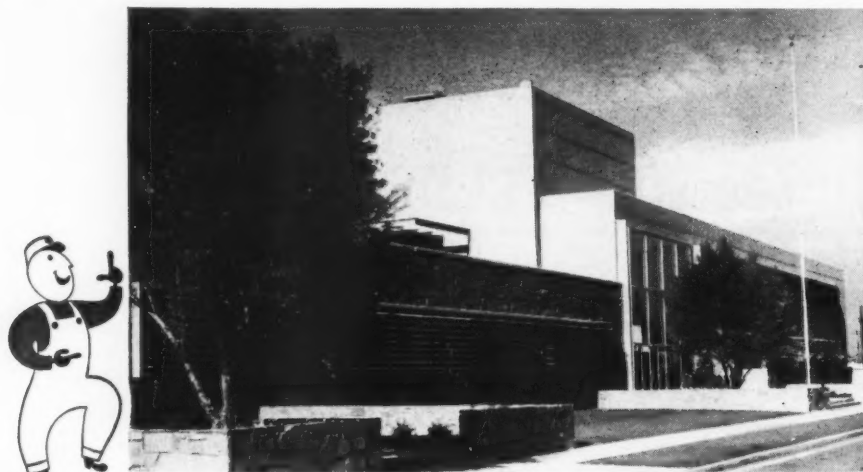
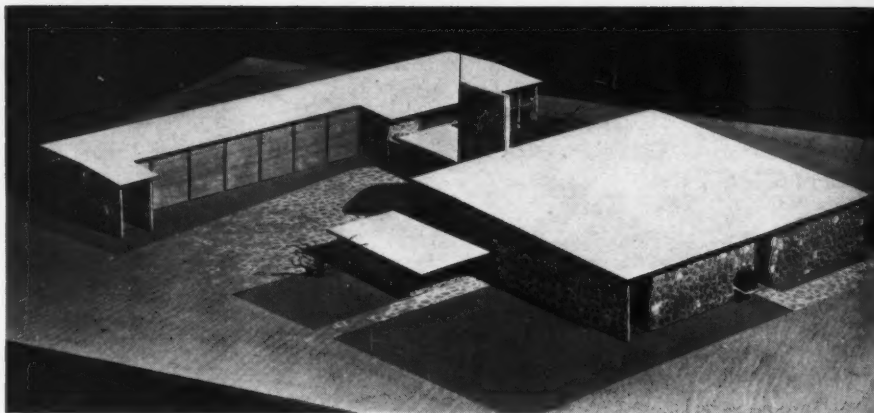
## THE RECORD REPORTS

(Continued from page 338)

### Education for Service

Probably the most cogent advice for the future of the field was given A.I.D. members by an architect — Dean Joseph Hudnut of the Graduate School of Design at Harvard.

Asserting that interior decorating ought to be a profession, with the basis of a specific education required by any



Public Health Dept. Building, Long Beach, California. Exterior concrete painted with Wesco DURASITE. Francis J. Huesel, Architect, Long Beach

## Sure, there's a colorful flat paint for CONCRETE

...There's a Specialized Wesco Paint for Every Stucco or Masonry Wall

For exterior concrete you want a paint that gives an *absolutely uniform* non-glaring finish without laps or streaks. You need a paint that's lime-proof and "breathes" moisture vapor without causing peeling or flaking. That's DURASITE, Wesco's *specialized* exterior resin paint for dense surfaces...for years the choice of many leading architects for its durability and unequalled color values.

No *one* paint can be right for all surfaces, but there's a Wesco *Specialized* Paint for every masonry surface—old or new, painted or unpainted, dense, porous or patched—that will give it beauty and protect it for years.



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"Masonry Painting Handbook"

— 37 photos of masonry surfaces with painting specifications of leading architects and painting contractors. Address Dept. V, in care of the Wesco plant nearest you.

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Trenton 7, N.J. • Matteson, Ill. • Good Hope, La. • Berkeley 10, Calif. • Los Angeles 23, Calif. • Portland 9, Oregon • Seattle 9, Washington • Montreal 22, Quebec • Sydney, Australia

The United Protestant Church of Park Forest opened a \$155,000 religious education building last month as the first unit in a program which will include a sanctuary, a chapel and a fellowship hall. The building has redwood, stone and glass exteriors on a skeleton frame of laminated wood beams and columns supporting wood floor and roof planking three in. thick. End walls and stair wells are stone, concrete. Architects Schweikher & Elting

profession, Dean Hudnut called for development among decorators of a "consciousness of mission" which he said was the most important gift of education.

"It is the gift," Dean Hudnut said, "which distinguishes, or ought to distinguish, the architect from the contractor, the decorator from the dealer in furniture. The professions had their origin in dedication to human service; they developed — law, medicine and architecture — out of the tradition of ministry in church and university; and I should not think it unbecoming if decorators, who are a species of architect, should remember the tradition they share with architects."

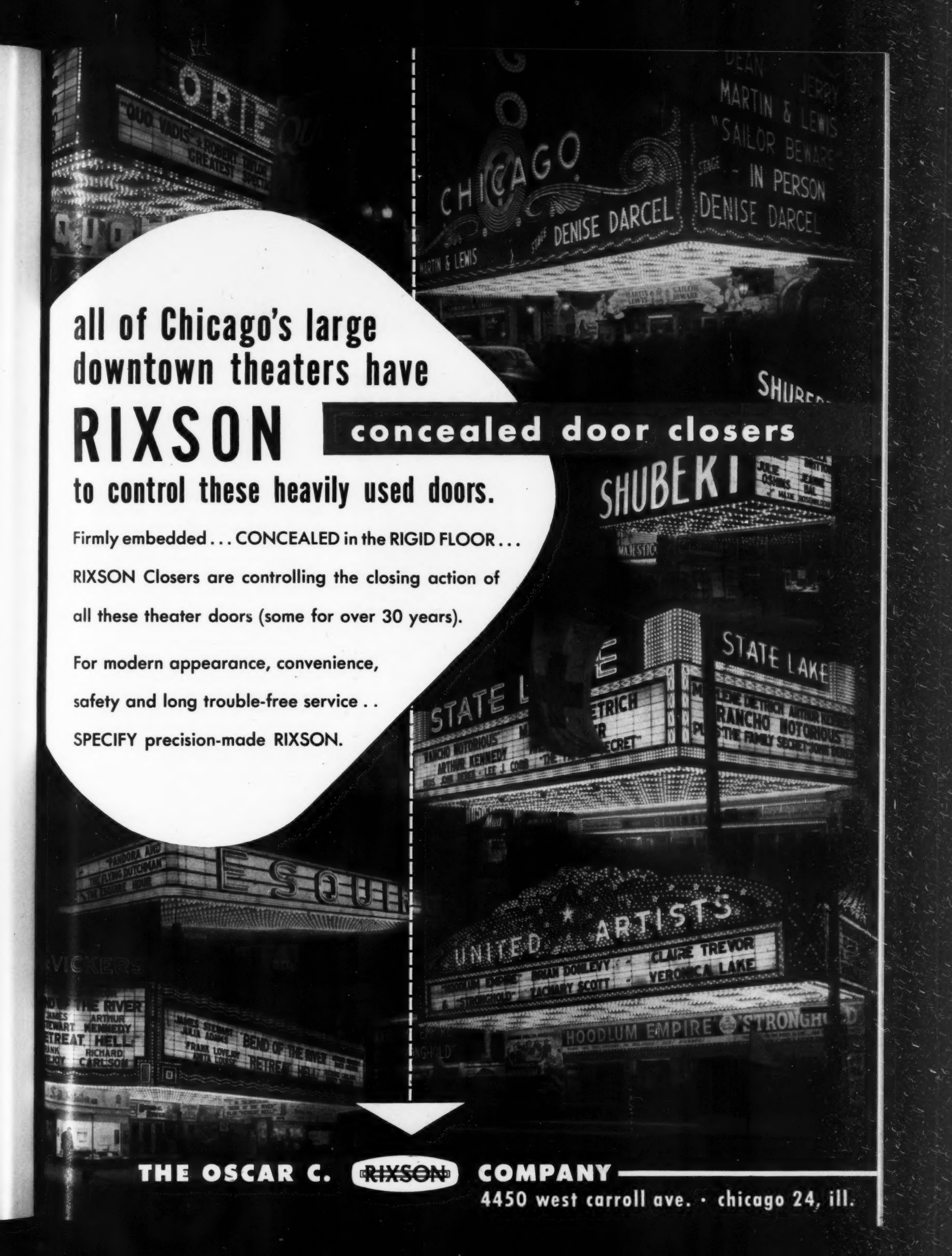
Dean Hudnut felt that in an era of growing remoteness from architecture of the average man the decorator often could serve as the sole channel for bringing some awareness of beauty "and of the necessity of beauty in the commonplaces of life" to dwellers in "our cellular cities."

### "An Art of Expression"

Two other essential elements of a decorator's education were described by Dean Hudnut as first, knowledge, and second, craftsmanship — "that kind of craftsmanship which uses pottery and rugs and furniture and wall paper and

(Continued on page 342)





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to control these heavily used doors.

Firmly embedded . . . CONCEALED in the RIGID FLOOR . . .

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## THE RECORD REPORTS

(Continued from page 340)

Walter Phillips, representing the City of Philadelphia, seals proclamation declaring April 28 to May 8 Architects' Week. Watching are Roy Carroll, left, Phila. A.I.A. President, and Beryl Price, right, chairman of the seven-state conference meeting May 1 & 2. Other committee members are, from left, Harold Haag, William Eschbach, Lloyd Malkus, George I. Lovatt, Jr. and Paul Harbeson



### WEATHER STRIPS FOR SLIDING DOORS

The residence of E. H. and M. K. Hunter, Architects, Hanover, N. H., enjoys a scenic view which is enhanced by merely sliding these doors from wall to wall. As with all "Accurate" Sliding Door equipment, the doors slide easily and quietly. When closed, they assure full protection against moisture seepage. Rain or snow *cannot* beat in.



For doors and windows of all types, "Accurate" Metal Weather Strip is unsurpassed. Write for working drawings, or if you prefer

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all the spoil of Altman's as the elements in an art of expression. I mean the mastery of a language that is eloquent, not of pretty effects in chintzes and lyre-back chairs or nostalgic adumbrations of George the Third or of the excellent Victoria, but eloquent rather of all the deeply human and moving drama whose *mise-en-scène* is entrusted to us; the serenities of family life, the adventures of love and of a mutual art to happiness, the comedies and sweet promise of childhood, and the less subtle pleasures of a cocktail party or a formal dinner."

#### Award Winners Displayed

Thirty-one award winners in the national Homefurnishings Design Competition sponsored by the A.I.D. and ten award winners in the student design competition were on display in the big "Decoration — 1952" exhibit at the convention.

First awards in the five categories of the Homefurnishings Competition were given as follows:

**Woven Fabrics** — Maxwell Hawker of Los Angeles, for both design and execution.

**Printed Fabrics** — Mrs. Lucienne Day of London, England, for design; Heal's Wholesale & Export Ltd. of London for Greeff Fabrics of New York, for execution.

**Floor Coverings** — Estelle and Erwine Laverne of New York, for design; Laverne Originals of New York, for execution.

**Wall Coverings** — Ben Rose of Chicago, for both design and execution.

**Lighting** — Harry Lawenda of Berkeley, Cal., for design; Kneeder-Fauchere of San Francisco, Cal., for execution.

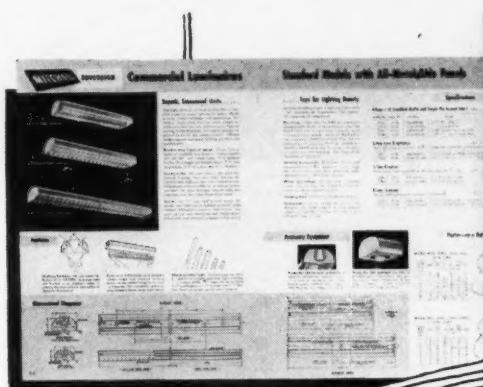
**Furniture** — Mrs. Florence Knoll of New York, for design; Knoll Associates of New York, for execution.

(Continued on page 344)

# MITCHELL lighting

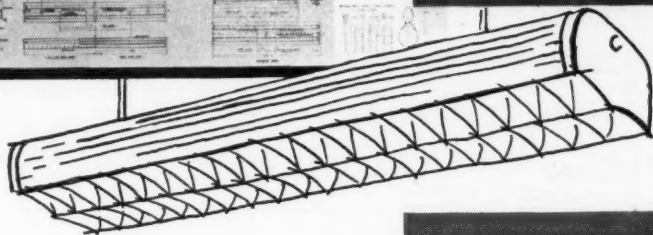
# easiest to specify

save time, specify properly for every lighting need with these 2 data-packed catalogs



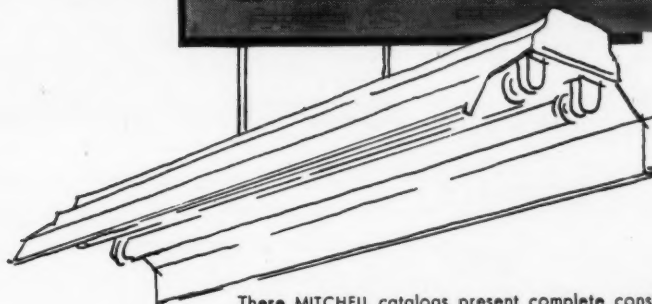
## Commercial Fluorescent Lighting

More than 70 superb Commercial luminaires, described in detail—for quick, tailored-to-the-job specification.



## "Dynalite" Lighting for Industry

You'll find it easy to specify for any industrial installation. Choose from 82 Dynalite Job-Rated units.



These MITCHELL catalogs present complete construction and performance details in clear, uniform, quick-reference style. You get application data, specifications, features, dimensions, curves for every model—for quick, proper specification and installation planning.

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Quality is not just a word—it is an important tangible that can be seen and measured in every MITCHELL lighting unit. These superbly engineered fixtures are built to the most exacting standards for easy, time-saving installation—for low-cost maintenance—for dependable, long-life, efficient performance. Where quality with sensible initial cost must be your most important considerations, in either commercial or industrial lighting—be sure—specify MITCHELL!

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Manufacturing Company  
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In Canada: Mitchell Mfg. Co., Ltd., 19 Waterman Ave., Toronto

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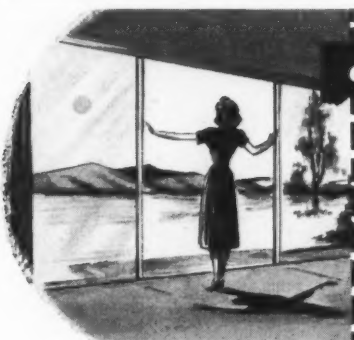
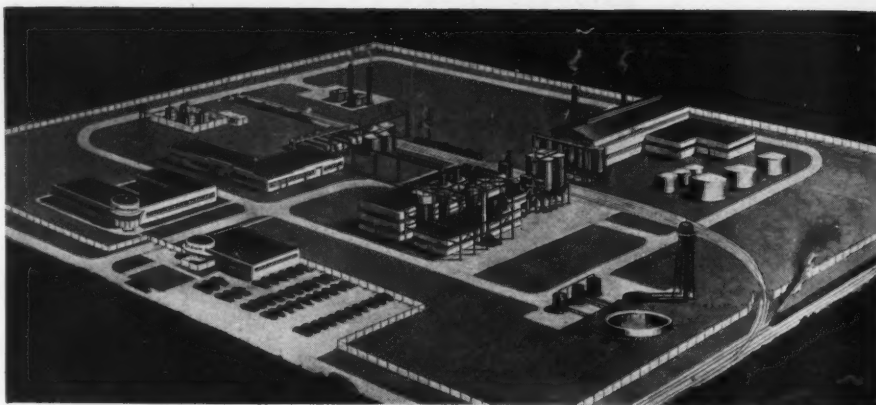
Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

## THE RECORD REPORTS

(Continued from page 342)

New \$7,000,000 plant which Davison Chemical Corp. is building for production of petroleum cracking catalyst and for other manufacturing operations. The plant will be located 10 miles south of Lake Charles, La., on the Calcasieu River. Facilities include administration building and laboratories at left, main process building in center. Architects-Engineers are Day & Zimmerman, Philadelphia



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that open wide to let the  
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Glide is the only horizontal sliding unit that has passed the rigid Air Infiltration test set up by the Pittsburgh Testing Laboratories, official testing laboratory for the Aluminum Window Manufacturer's Association. A copy of this report available on request.

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For the complete story of Glide superiority in meeting the most exacting specifications see Sweet's File, Architectural or write for data.



**Furniture** — Peter Rooke-Ley of San Francisco, Cal., for design; California Contemporary, Inc., of Oakland, Cal., for execution.

### Student Prizes Given

Three prizes (\$200, \$150 and \$100) and ten honorable mention awards of \$25 each were given for the top designs in the annual student competition. This year's problem was design of a country club lounge and adjoining terraces.

Award winners were:

**First Award** — Allen Tate, Alabama Polytechnic Institute, Auburn, Ala.

**Second Award** — Mrs. Mildred S. Friedman, University of California at Los Angeles.

**Third Award** — Sidney Schetina, New York School of Interior Design.

**Honorable Mentions** — Paul E. Zirm, John Pierce, Joan Lee Wolk, and Dorothy Wyeth Hook, all of Pratt Institute, Brooklyn; Robert J. Murray, and Stewart Dean Pelton, New York School of Interior Design; and Barbara Cotton, University of Washington, Seattle.

Architects were among the members of juries for both competitions.

### AT THE COLLEGES

#### Acoustics Program at M.I.T.

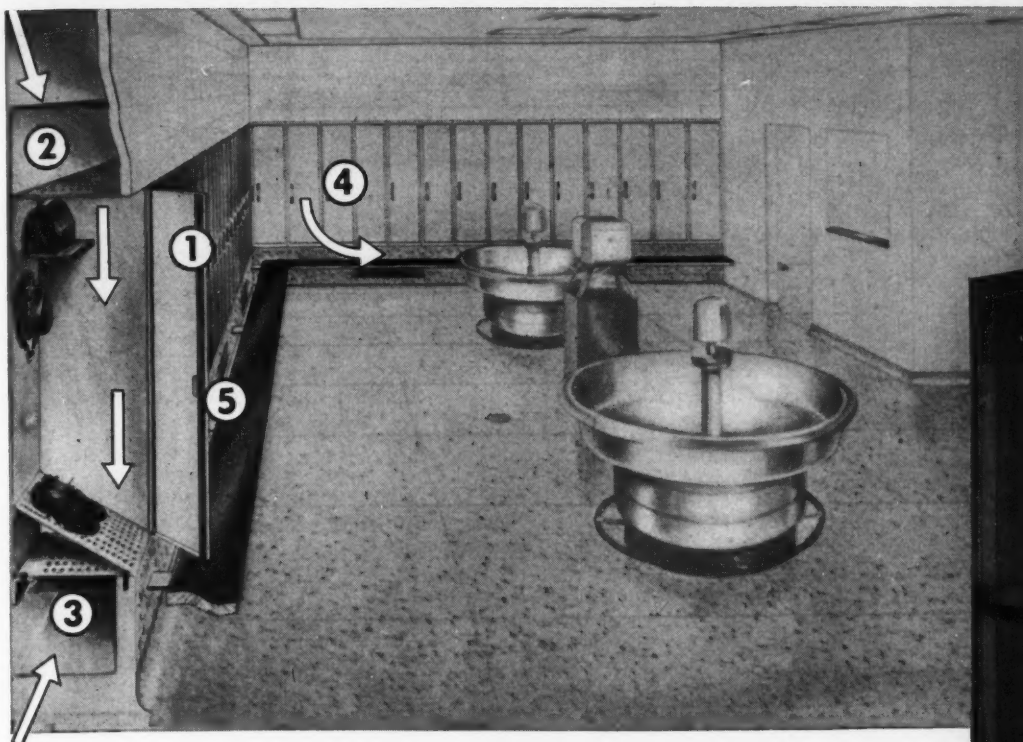
Architectural acoustics will be the subject of an intensive one-week course at the Massachusetts Institute of Technology June 16-21.

Acoustic design criteria derived from properties of speech and hearing and from effects of noise on people will be among the subjects covered.

The program of lectures, round-table discussions and demonstrations will include such topics as behavior of sound in rooms, acoustic properties of materials

(Continued on page 346)





Check the features of these Scott-designed "AIRFLOW" lockers:

1. Solid doors allow no odors to enter or escape.
2. Top plenum through which fresh air enters.
3. Base plenum through which stale air is exhausted.
4. Exhaust vent in locker island base carries off humid stale air.
5. Benches supported from the island base for convenience in cleaning.



## Something new in Locker Room Planning

**NOW YOU CAN** introduce self-contained ventilation into lockers without forcing stale air into employee locker rooms.

Your client knows it's good business to make his plant a pleasant, efficient place. Employee morale rises, absenteeism and costs are reduced. Odor-filled locker rooms have always been a plant problem area. To keep fresh air in these rooms, individually ventilated lockers are essential.

Developed by the Scott Washroom Advisory Service, new "AIRFLOW" lockers, equipped with solid doors, are designed to prevent unpleasant work

clothing odors from escaping into the locker room area. Mechanical ventilation draws fresh air into each locker from the top plenum, forces stale air out the base plenum.

This is another example of the aid Scott Washroom Advisory Service Consultants offer to you who plan personal service rooms. This know-how gained from servicing more than half a million washrooms, is yours for the asking.

Contact Scott Washroom Advisory Service, Scott Paper Company, Chester, Penna.

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At no cost or obligation, please send me your study of personnel, traffic and maintenance problems, "Plant Washroom Designing."

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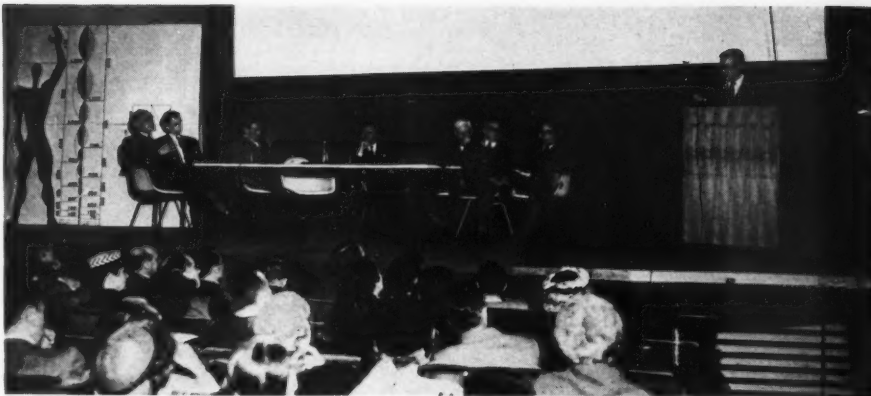
**SCOTT**  
Symbol of  
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## THE RECORD REPORTS

(Continued from page 344)

Eero Saarinen speaks at Museum of Modern Art symposium, *De Divina Proportione*. Panel members from left: Philip Johnson, Director of the Museum's architecture dept.; Arthur Drexler, its curator of architecture; Josef Albers, Yale University; Enrico Peressuti, Italian architect; Dr. W. B. Dinsmoor, Columbia University; George Howe, Yale University; and Jose Luis Sert, President of C.I.A.M., Moderator



## CLOSE THIS DOOR!

Did you ever notice the number of load panel doors open on hot busy days? There is a reason for it . . . important to architects.

Doors are often left open to cool circuit breaker or fuse equipment . . . and prevent nuisance power interruptions due to accumulated heat. But this is unnecessary:

HEINEMANN Circuit Breakers do not generate heat . . . do not use heat in their operating principle. They have no thermal elements. A HEINEMANN Circuit Breaker gives the same performance regardless of room temperature . . . or climate. Identical performance is provided by a HEINEMANN Circuit Breaker in Maine or New Mexico.

Beyond mere code requirements, more architects and engineers are specifying HEINEMANN Circuit Breakers today because of these simple facts of performance.

**don't use heat . . . USE POWER**

Send for your copy of "What You Should Know About Circuit Breakers". HEINEMANN ELECTRIC COMPANY, 115 Plum Street, Trenton 2, N. J.

**HEINEMANN** *Circuit breakers*



and structures, characteristics of sources of sound, site plan and building layout, shape analysis for sound distribution, noise reduction analysis, reverberation analysis and sound and vibration isolating construction.

The course will be conducted by Professors Lawrence B. Anderson, Leo L. Beranek, Richard H. Bolt and Robert B. Newman of M.I.T. and William Allen of the Building Research Station, England.

Requests for application forms should be addressed to Dr. Ernest H. Huntress, director of the Summer Session, Room 3-107, Massachusetts Institute of Technology, Cambridge 39, Mass.

### "First" at Illinois

The first class of city planners at Illinois Institute of Technology will graduate next month under the Institute's new five-year program.

The 16 students in the class have had four years of architecture courses and a fifth year of studies in city and regional planning, equipment for buildings and industrial history.

### Wakefield Backs Research

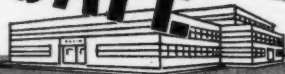
A research fund of \$10,000 at the Massachusetts Institute of Technology and a student fellowship of \$2650 at Case Institute of Technology have been established by the F. W. Wakefield Brass Company, Vermilion, Ohio.

The M.I.T. fund, in the School of Architecture, will provide for study of all environmental factors contributing to the process of seeing; provide a center for investigating the effects of various distributions of light, heat, sound, air movement and other energy factors upon task performance, and methods and equipment for control of these factors; and for collating researches in physiology, ophthalmology

(Continued on page 348)



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## SIGNALS



You can't stop with designing a fire-proof plant or building. As important is the signal system that makes it run. Whether it's audible or visual paging and signaling devices, you're sure when you specify a "Name Brand" for your building "nerve" network. It's safer ... and more dependable.

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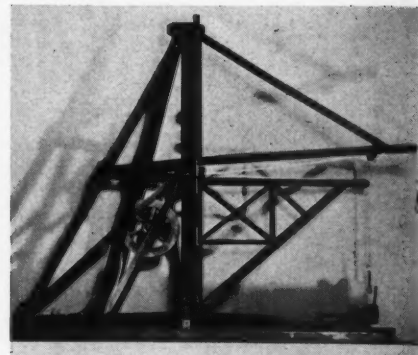
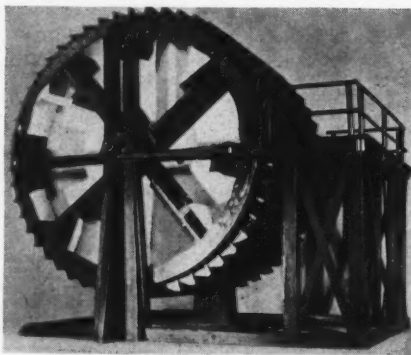


## THE RECORD REPORTS

(Continued from page 346)

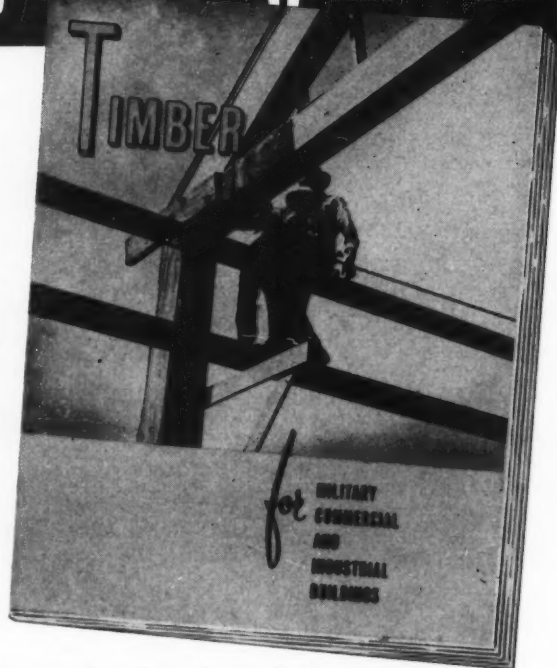
### DA VINCI AND BUILDING

A very prolific inventor named Leonardo da Vinci has been having an exhibition of his inventions and scientific drawings at the Metropolitan Museum of Art, where his paintings are perhaps more familiar. Photos at right show two of his contributions in the building field—both put to use in their time. Right: an air conditioning unit built for the boudoir of Beatrice d'Este,



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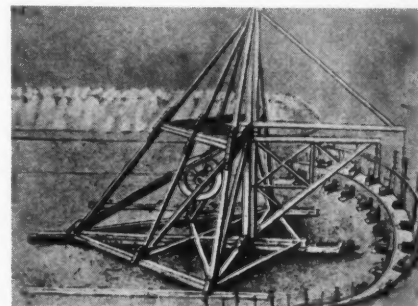
Name.....

Company.....

Street..... City..... State.....

AR

wife of Leonardo's patron. Next: a drawing by da Vinci and a model built from it of an excavating machine, consisting of a large crane with a series of pivoting arms which supported loading cages. The model, like the others in the exhibition, comes from the Fine Arts Department of International Business Machines Corp.



and optometrics and other fields which have bearing upon seeing.

The Case fellowship is for research on thermal environment and the production of a thesis covering certain phases of air conditioning and radiation.

### Hopper Competition Opened

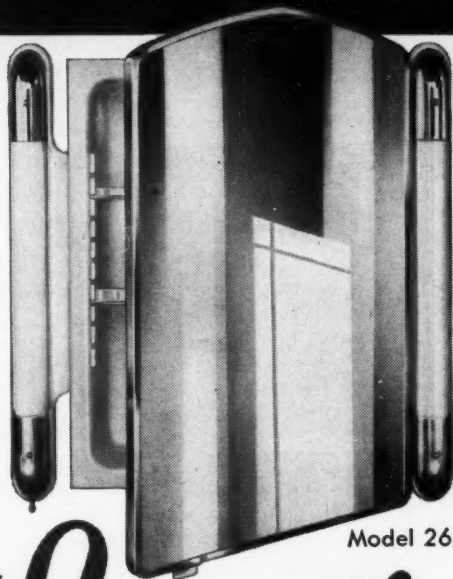
Advanced students of design in the Department of Architecture at Yale University are taking part in the third annual competition for the \$2000 Magnus T. Hopper Fellowship in Hospital Design.

The Fellowship, established in 1949 in memory of the former medical director of the Carson C. Peck Hospital in Brooklyn, carries a stipend of \$1500 for tuition and expenses, plus \$500 for books and travel, for one year of specialized studies at the graduate level.

The problem this year is a 155-bed hospital for a town in the vicinity of New Haven.

(Continued on page 350)

# A Beautiful, LOW-COST FLUORESCENT LIGHTED CABINET...



Model 2654-80

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QUALITY FEATURES!

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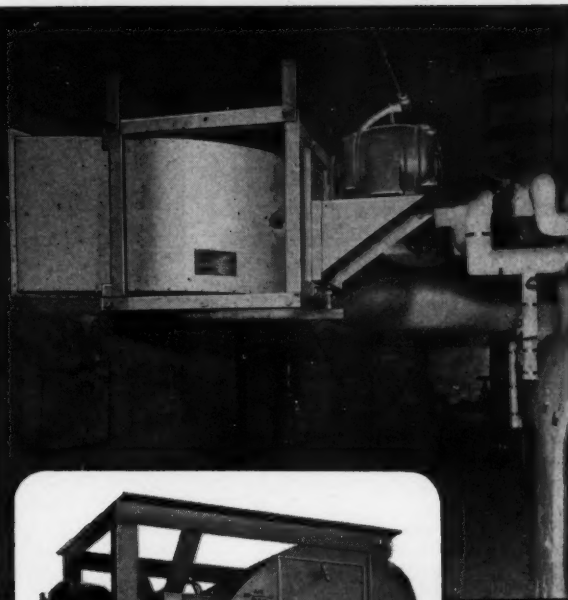


Illustration shows unit with bottom inlet.  
Installation shows unit with side inlet.

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TURBINES



### SCHOOL BUILDING TOPIC FOR INDIANA CONFERENCE

The annual Indiana and Midwest School Building Planning Conference will be held at the School of Education on the Bloomington, Ind., campus of the University of Indiana July 10-11.

"Keeping Ahead of the Children" is the theme of the conference, which is expected to attract superintendents, principals, teachers, board of education



Kuhlke and Wade, Architects, have designed the 100-bed hospital for the Sisters of St. Joseph of Corondelet in Augusta, Ga., for future expansion, oriented the patients' wing for a view of the Savannah River Valley

## Take a look at **AZROCK** for '52!

### TAKE A QUICK LOOK

at AZROCK'S New Color Line for '52! Spread out the colors and compare them with any other asphalt tile color line. See how color for color AZROCK is brighter, cleaner, more attractive. These colors will help you satisfy your clients more completely.

### TAKE A CRITICAL LOOK

—like your clients do. AZROCK colors are designed to give the architect a completely balanced line of colors so that he can design interiors of greater architectural perfection.

### TAKE A LONG LOOK

at the physical characteristics of these new color samples. Note the smooth surface, the attractive marbleizing, and the sharp, precise dimensions. They all contribute to the AZROCK reputation for performance!

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"Azrock Makes Fine Floors"

members and plain citizens as well as architects.

The Indiana School of Education will be holding a school building workshop July 7-19. The workshop, carrying two hours' credit, will be limited to superintendents with school building problems or their nominees. Selected architects and other specialists will serve as consultants.

### RECREATION AREA GIVEN TO PARK FOREST VILLAGE

Seventeen and a half acres of land to be developed in an extensive recreation program have been leased by American Community Builders, Inc., of Park Forest to the village government for a token dollar-a-year.

Nine tracts have been made available to the recreation board of the village as "a contribution to continued good living in Park Forest."

The planned community on a site 27 miles from Chicago has plans for rapid completion of two baseball diamonds, two football fields, three tennis courts, a field hockey area, four volley ball, badminton and aerial dart courts, three horseshoe pits, a croquet area and an outdoor amphitheater.

Because in Park Forest there are no slums and children all have their own lawns to play on, emphasis at the playgrounds will be mainly on organized activities. The plan of the town makes it possible to place playgrounds so at least one is within walking distance of every home.

(Continued on page 352)



Builders Demand  
Architects Specify

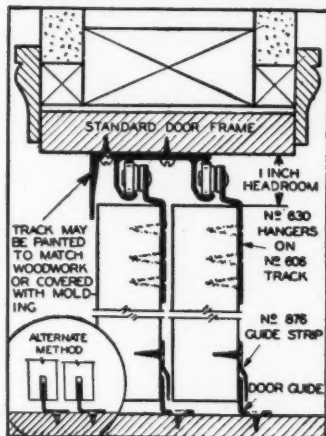


**Sterling**  
HARDWARE

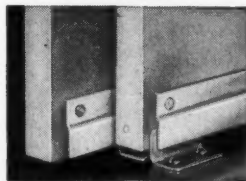
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The 600 Series includes Hangers for both  $\frac{3}{4}$ " and  $1\frac{3}{8}$ " by-passing doors. Track is aluminum.

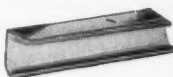


No. 876 Guide Strips eliminate grooving bottom of door. Save installation time and trouble.



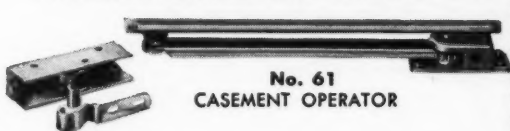
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Adjustable Hanger  
For Single Doors

Aluminum or  
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Single Doors



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Sec. 4E in Builders' File  
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Architect: R. W. Noel, Jackson, Mississippi.

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## THE RECORD REPORTS

(Continued from page 350)

The Long Island Jewish Hospital, now under construction in Glen Oaks, Queens, N. Y., was designed by Louis Allen Abramson, architect, in cooperation with Dr. Eugene Rosenfeld, the hospital's executive director, to be built in two stages. The present phase will provide 205 beds in a six-story building of reinforced concrete construction. Expansion to 10 stories and 500-bed capacity will come later



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## **BROOKLYN FUND YIELDS FIVE SCHOLARSHIPS**

Proceeds from the Brooklyn Architects' Scholarship Foundation's first annual dinner dance will provide funds for five scholarships, Foundation President Martyn N. Weston has announced.

Scholarships of the Foundation, a new collaborative venture of the Brooklyn Society of Architects and the Brooklyn Chapter of the American Institute of Architects, will be awarded annually to financially handicapped high school graduates with marked ability in architecture for use in any recognized university or school of architecture selected by the student.

## **COMPETITIONS**

### **Bricklayers Compete**

The national finals of the fourth annual Brickmason Apprentice National Competition, sponsored by the Bricklayers', Masons' & Plasterers' International Union, will be held May 18-24 in Boston.

Registered apprentices from every state in the union may compete if they have not completed more than two years of their training by June 1, 1952. About 7000 are eligible.

The contest is an annual event designed to promote higher standards of apprentice training, as well as to determine the nation's outstanding brickmason apprentices.

### **Harlan Scholarship Offered**

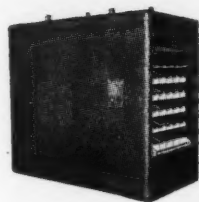
A \$5000 scholarship, the gift of C. Allen Harlan, president of the Harlan Electric Company, Detroit, is offered under the sponsorship of the Michigan Society of Architects for a ten months' research project "to stimulate interest

(Continued on page 356)

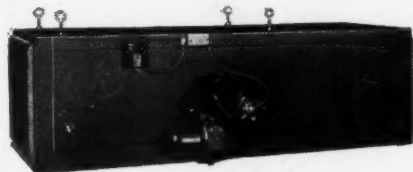


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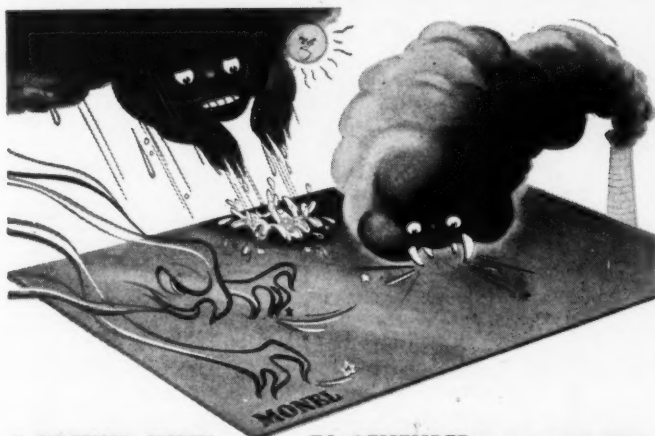
J-C OIL-FIRED SUSPENSION UNITS have outputs of 112,000 to 450,000 BTU. An efficient heater requiring less space than any furnace of its type and rating. Units feature greater heating efficiency with less heating surface ... due to an exclusive design of ducts and baffles. Ease of installation is a feature—and ready access facilitates servicing.



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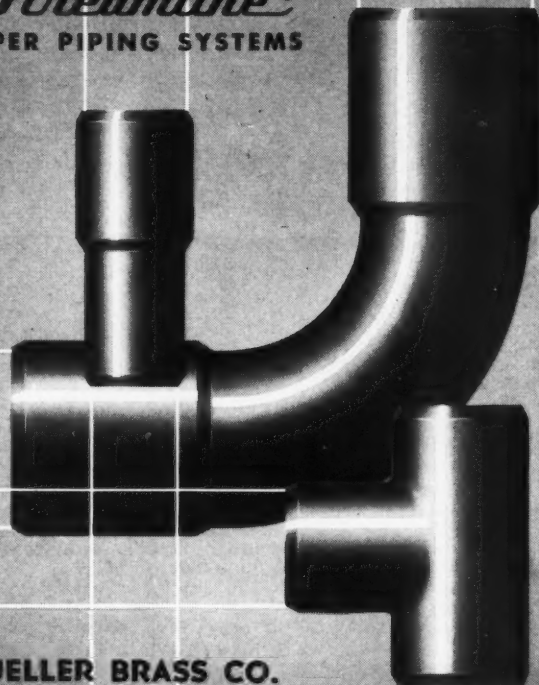
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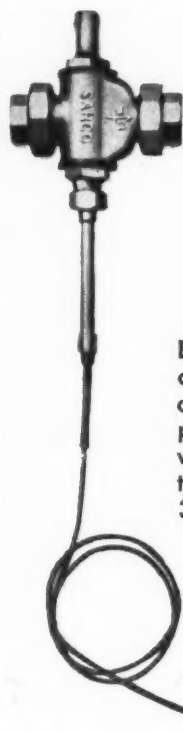
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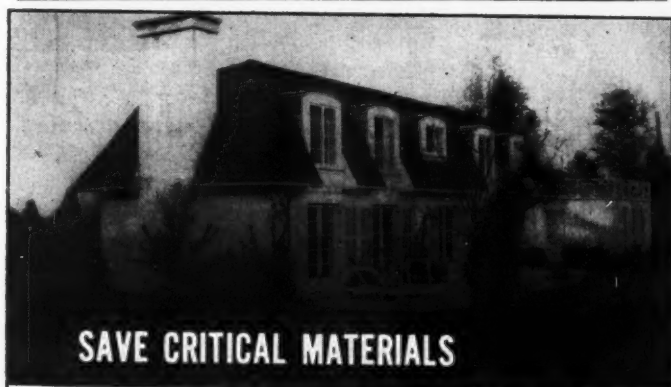


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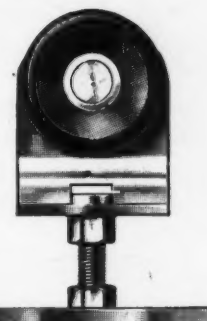
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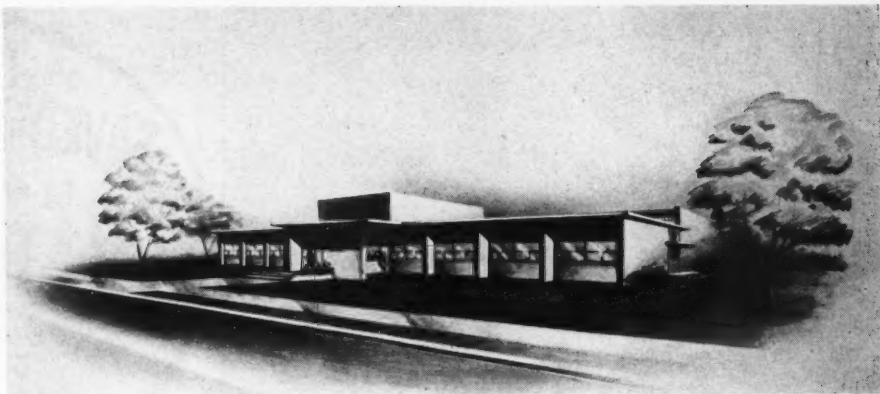
YOUR DEALER'S NAME \_\_\_\_\_



## THE RECORD REPORTS

(Continued from page 352)

Photo of architects' drawing of new half-million-dollar Edison Laboratory at West Orange, N. J. The one-story reinforced concrete structure will provide 7400 sq ft space and a total of 13,000 sq ft of laboratory space with the two older buildings to which it will be joined. Harbeson, Hough, Livingston & Larson of Philadelphia are the architects



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Architects

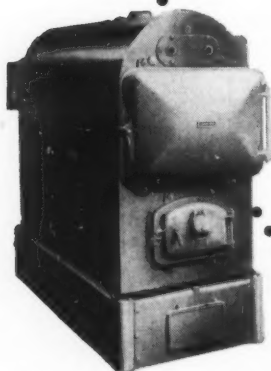
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in contemporary architecture and to focus attention to the great contribution that has been made in industrial architecture in and around the city of Detroit."

All U. S. architects, draftsmen and upper class students of architecture and architectural engineering are eligible. Candidates must be not over 35 years of age and either members of or sponsored by members of the Michigan Society of Architects.

The type of research will be chosen by the contestant and the basis for the award will be primarily to choose the qualified person with the most worthwhile project for study. A jury of five will be appointed by the directors of the Michigan Society of Architects.

Applicants must present their material not later than June 1. Instructions for applying may be obtained from: Prof. Ralph Hammett, chairman, Committee on Education and Research, c/o Mr. Talmage C. Hughes, executive secretary, 120 Madison Avenue, Detroit 26, Mich.

### Fabric Design Competition

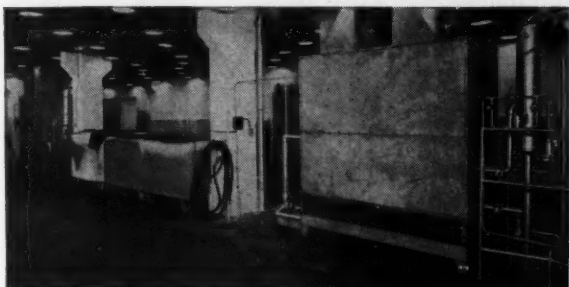
More than \$1500 in prizes will be given winning entries in the second international fabric design competition for students of fine and applied art schools throughout the United States and Canada.

Sponsors of the competition, Colonial Drapery & Curtain Corporation, describe the primary aim of the contest as stimulation of creative design in the field of roller printing and development of new talent in the industry. Development of a closer relationship between art and commercial designing is another aim.

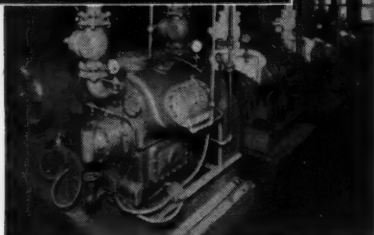
Information is available from Dorothy McCabe, Colonial Drapery & Curtain Corporation, 79 Madison Ave., New York, N. Y.

(Continued on page 360)





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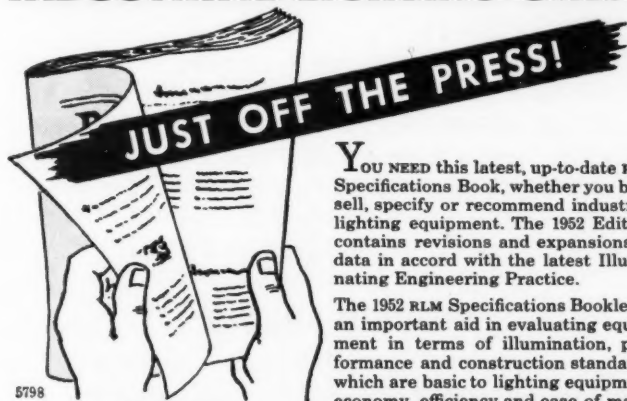
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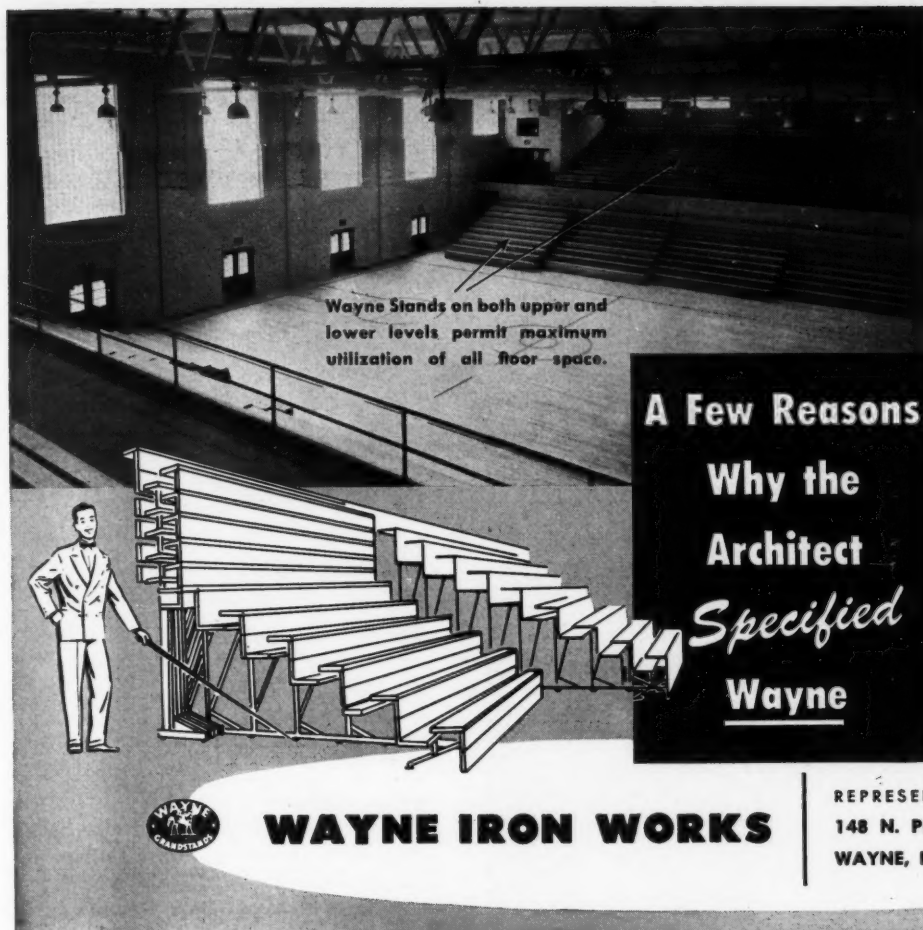
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## THE RECORD REPORTS

(Continued from page 356)

### "Room for Improvement"

A contest aimed primarily at home owners and offering a total of \$20,000 in 46 prizes for statements of four remodeling problems has been announced by the Douglas Fir Plywood Association.

Any architect or architectural student may enter the "Room for Improvement" contest if he is a home owner. Architects get into the contest in another



The Waylite Company has opened what is described as the world's largest light-weight aggregate plant on the Bethlehem, Pa., site of the Bethlehem Steel Company. The plant was designed and engineered by the Waylite Company and Conveyor Systems Inc.

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- Pius XI High School, Milwaukee, Wis. Arch. Mark F. Pfaller
- Euclid High School, Euclid, Ohio Arch. Fulton, Krinsky & DeLa Motte
- Congregational Church, San Diego, Calif. Arch. Walter C. See
- Mission of Our Lady of Mercy, Chicago, Illinois Arch. Barry and Kay
- Alamo Stadium, San Antonio, Texas Arch. Phelps, Dewees, Simmons
- Barrington Illinois High School Barrington, Illinois Arch. Perkins and Will



way as well, since eight local architects will be commissioned to design solutions to the remodeling problems posed by home owners who are top winners.

Entrants will describe in brief statements the home improvements wanted and why plywood would be chosen to make them. There are four classifications: remodeling by adding new floor space such as a new room or wing (city and suburban); remodeling by adding floor space (farm); remodeling within existing walls (city and suburban); and remodeling within existing walls (farm).

Entry blanks can be obtained by writing to Douglas Fir Plywood Association, Tacoma 2, Wash.

### ADDENDA

• Charles R. Colbert, A.I.A., of New Orleans acted as consultant to Bodman & Murrell, Architects, of Baton Rouge for the North Scotlandville, La., Elementary School (ARCHITECTURAL RECORD, March 1952, pages 155-157).

• The name of Malcolm E. Smith, Associate Architect, should have been listed with his firm, Turner & Northington, Architects, in the article about the residence for Dr. and Mrs. W. C. Kennedy, Florence, Ala. (ARCHITECTURAL RECORD, March 1952, pages 181-183).

• The model of Sunset Community Center shown on the cover and in the article on pages 121-131 of the March 1952 issue of ARCHITECTURAL RECORD was made by Workshop Models.

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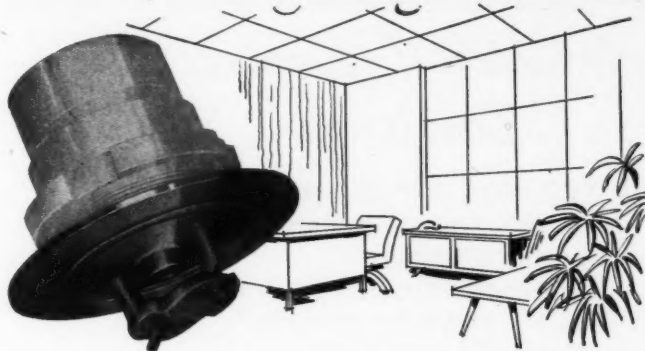
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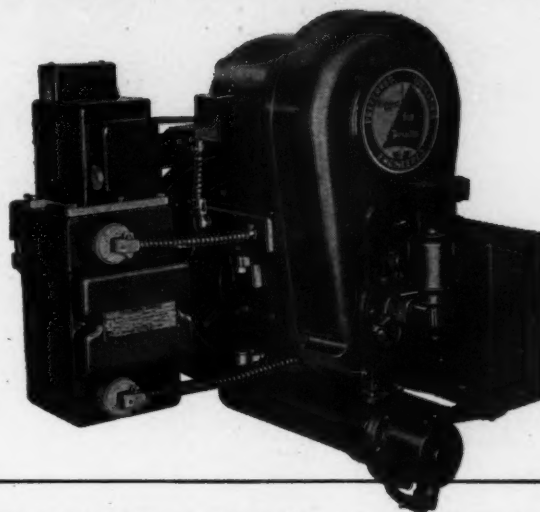
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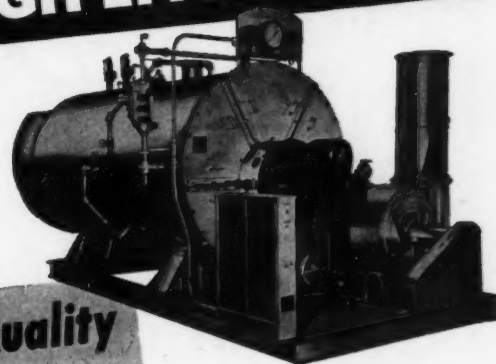
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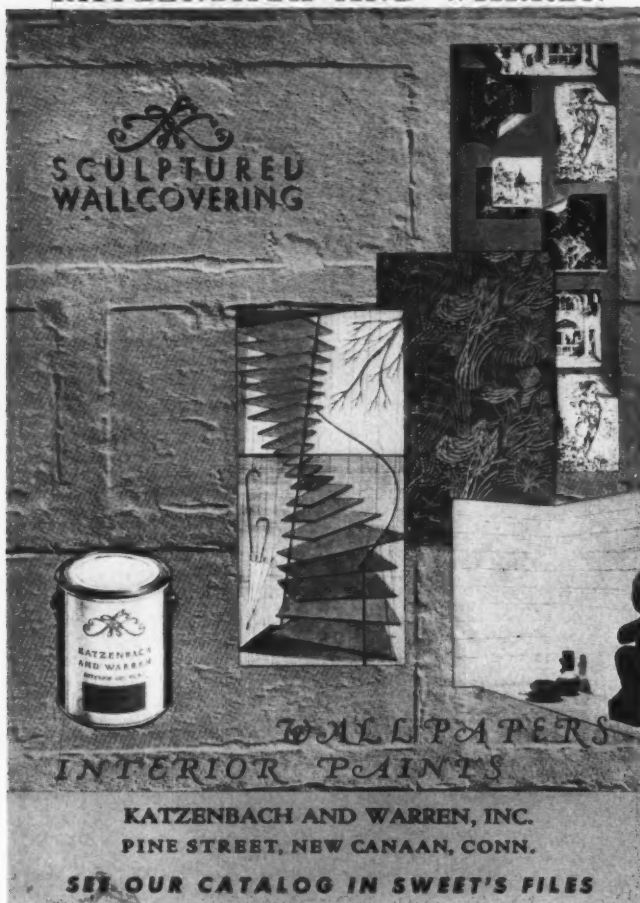
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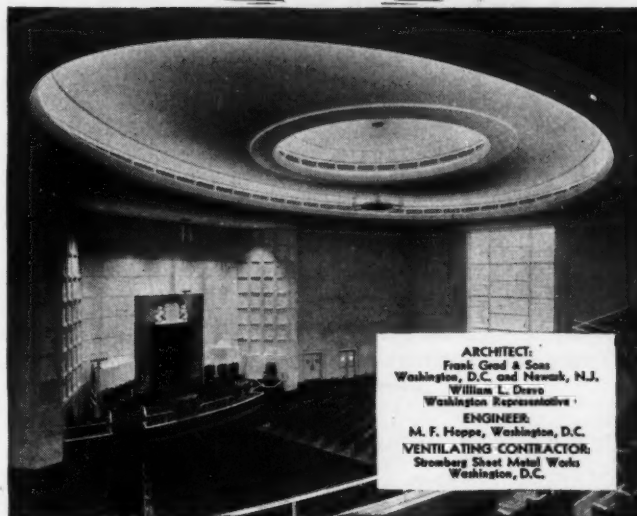
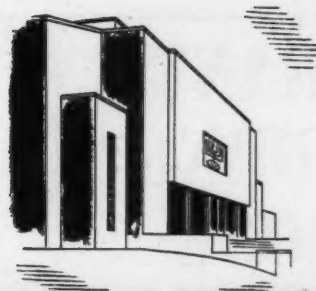
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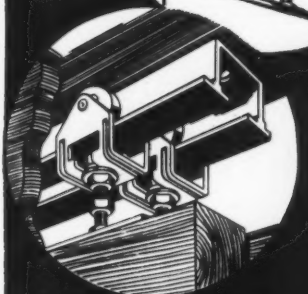
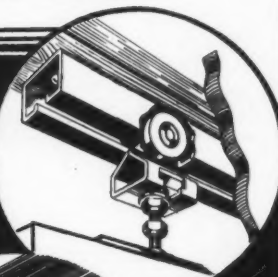
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## THE RECORD REPORTS

### CANADA

(Continued from page 36)

#### 1952 Approvals Top 1949

Mortgage loan approvals made by life insurance, trust and loan companies in 1951 were 17.6 per cent lower in the aggregate than in 1950, but — even so — were 11.3 per cent higher than in 1949.

Fact is that the years extending from 1946 through 1950 and into 1951 constituted a very exceptional period in lending history. Much of the money invested in mortgages came from the sale of Dominion of Canada bonds. With the drop in the bond market last spring, and Dominions selling at a discount, the switch became much less attractive. This was an important factor contributing to a 40 per cent fall-off in loan approvals during the last seven months of 1951.

#### Bond Yields Up

Yields on Dominion, provincial, municipal and corporation bonds have continued to show improvement as a result of the general rise in interest rates.

During the period Oct. 31, 1950–Jan. 31, 1952, the yield on Dominion bonds rose 0.72 per cent. Meanwhile the yield on provincials went up 0.99 per cent, municipals 1.28 per cent, public utilities 0.92 per cent and industrials 0.84 per cent.

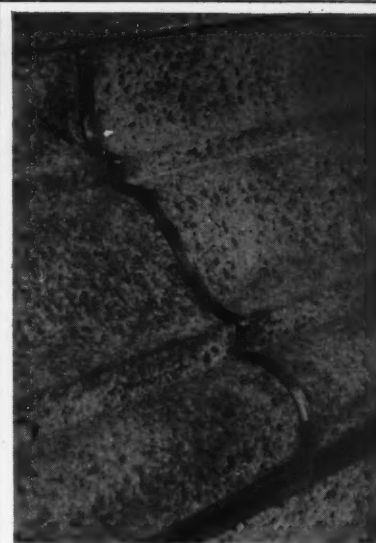
The increase of one half of one per cent allowed last year in the gross yield on NHA mortgages is not as great as the rise in yields on other types of securities. In October 1950, there was a spread of 2.23 per cent between the gross yield on Dominion bonds and the gross yield on NHA mortgages. Today the spread is only 2.01 per cent. The differential in gross yields between municipal bonds and NHA mortgages has been reduced from 1.57 per cent to 0.79 per cent.

Under these circumstances, it is not strange that an increasing amount of investment funds is going into provincial, municipal and corporation bonds instead of mortgages.

#### Other Mortgages Freer

The outlook for conventional mortgages financing is somewhat better than

(Continued on page 368)



*Weathercap conforms readily to masonry contours—makes a neat and permanently protected joint.*



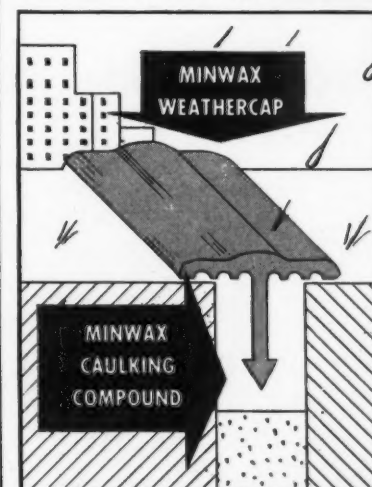
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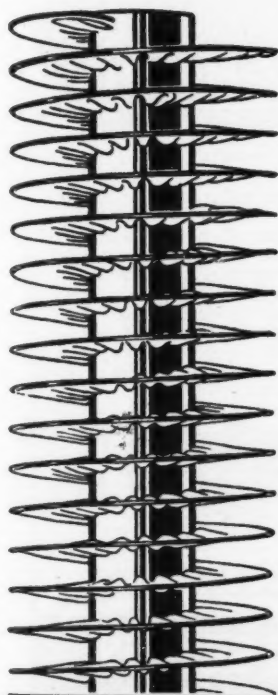
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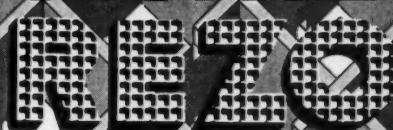
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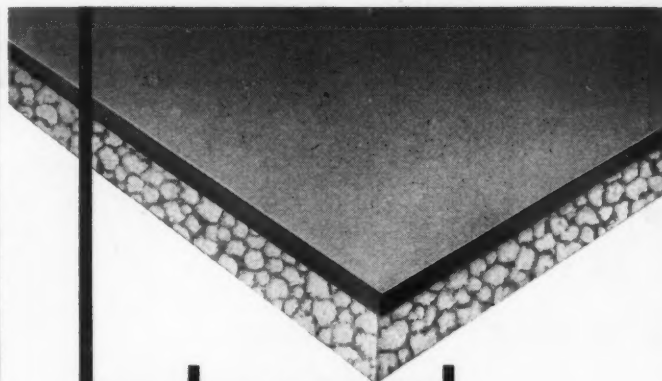
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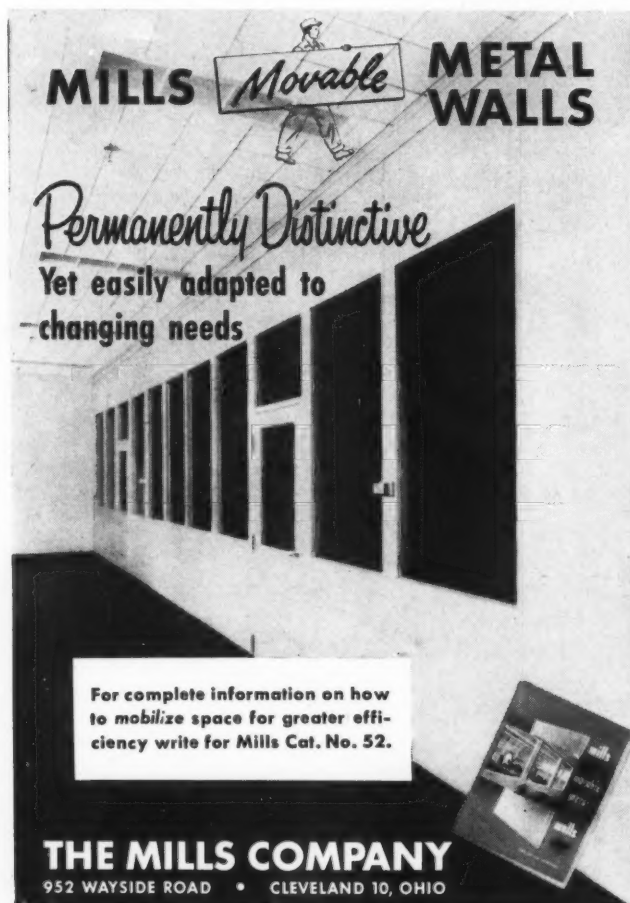
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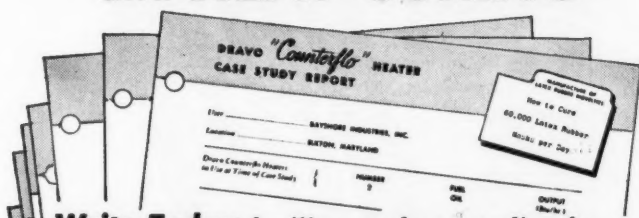
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**REAL FACTS on**

**Residential & Commercial**

**BASEBOARD  
RADIATION**

**Brown Bayce-Heet**

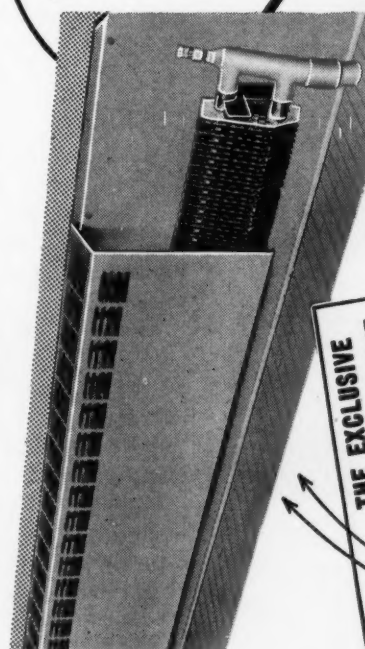
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NAME	SQ. FT./HR PER LINEAR FOOT	215°F	210°F	200°F	190°F	180°F	170°F
BROWN BAYCE-HEET*	4.6	1100	1045	945	855	760	670
A	2.35	560	530	480	440	390	340
B	2.63	630	600	540	490	435	385
C	2.75	660	630	570	510	460	400
D	2.90	690		590	540	480	420
E	2.5	597	572	522	472	422	373

**BROWN PRODUCTS COMPANY**  
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WOODVILLE, OHIO



## THE RECORD REPORTS

### CANADA

(Continued from page 364)

that for NHA financing. Rates are 6 per cent and 6½ per cent compared with 5 per cent for NHA ones.

### NHA Terms Easier

However, it is under the National Housing Act that the easiest terms are offered prospective home owners. Not only is the interest rate lower, but down payments are less as well.

As of last October, loans equal to 80 per cent of an agreed sale price are available under the Act. No lending institution, insofar as is known, has refused to sign the new agreements offered by CMHC under the revised legislation, but some continue to make loans only on the old basis.

A point to remember is that it is not enough to be able to save the down payment on an NHA house. The ratio of debt service must not exceed 23 per cent of the would-be purchaser's or builder's income.

With the larger loans available since October, the increase in interest rate from 4½ per cent to 5 per cent and higher municipal taxes, many people are disqualified for ownership because their incomes are too low.

### Longer Amortization Suggested

It has been suggested that by extending the amortization period from 20, or sometimes 25, years to 30 years or longer, the 23 per cent ratio becomes less of an obstacle since carrying charges are lower.

However, longer amortization periods for NHA loans are opposed by many lending institutions. They claim that present government guarantees provide insufficient protection for their investment.

During the early years of long term amortization, the monthly mortgage payments are practically all interest and very little principal. It takes a long time for the owner to establish an "adequate" equity.

In today's selective market, lending institutions can hardly be blamed for choosing the safest as well as the most profitable outlet for their funds. At the same time, Canada must have

(Continued on page 372)

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drawing pencil of the Masters

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**EXPENSIVE.**

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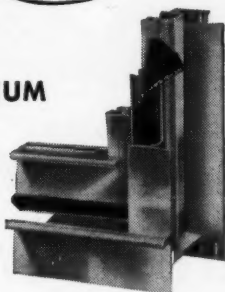


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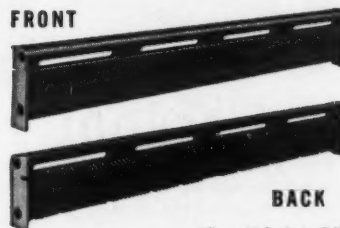
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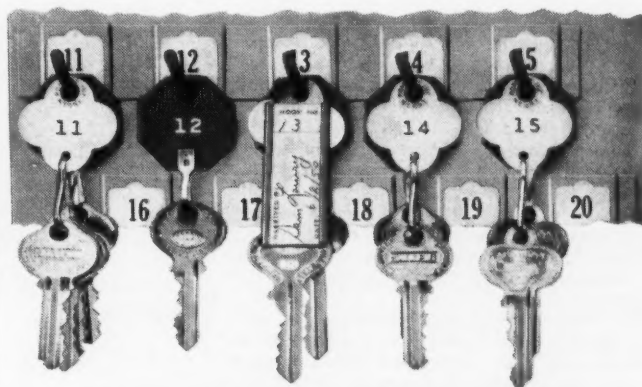


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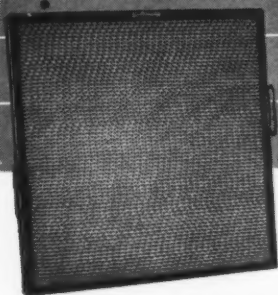
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## THE RECORD REPORTS

### CANADA

(Continued from page 368)

housing. If no formula can be found by which private investment can fill the need, a hue and cry may be raised for undertaking a publicly financed program.

### Building Declines 7 Per Cent In First Two Months of 1952

Construction contracts awarded in February had a value of \$108.7 million, 11 per cent below the figure for February 1951.

Adding the February total to that of January, which also declined in comparison with the same month a year ago, the aggregate for the first two months now stands at \$260.0 million, 7 per cent less than the figure for the same period in 1950.

Awards for industrial construction showed gains, according to MacLean Building Reports Ltd., but other categories slumped.

These are the two-month totals:

#### Construction Contracts Awarded (Millions of Dollars)

	1952	% change from 1951
Residential	38.7	- 5
Commercial & Institutional	44.5	-41
Industrial	48.0	-40
Engineering	129.8	+53
	260.0	- 7

Industrial awards were paced by a \$17 million automobile factory at Oakville, Ont., and a \$13 million chemical plant at Edmonton. An engineering job—a \$10 million bridge for Halifax—came next, followed by a \$7 million chemical plant in the Varennes-Vercheres area of Quebec.

Remaining big jobs, valued at \$3 million and under, consisted of two housing projects, Dorval and Beaconsfield, both in the Montreal area; a hospital at Pembroke, medical buildings at Ottawa and Downsview, Ont.; a hotel addition in Calgary, additional work at the steam generating plant in Windsor, street paving in Edmonton, and a plant addition at Thorold, Ont.



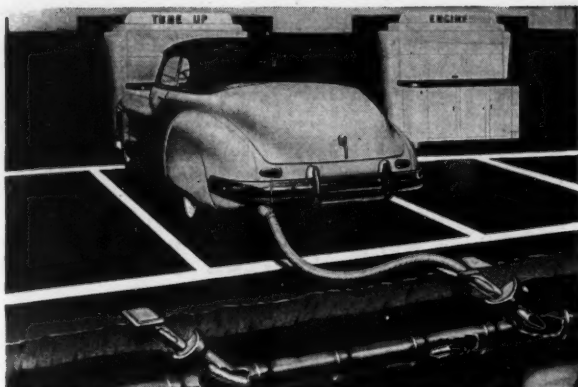
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For rapid removal of concentrated heat, smoke, dust and fumes, the new Burt Free Exhaust Fan Ventilator offers you remarkable efficiency. Its free opening exhausts an unrestricted column of air vertically upward. Burt's Axial Flow Airfoil Fan, designed specifically for rapid air removal, accelerates the exhaust column at high velocity. Twin dampers open in operation—close automatically when power is off, to thoroughly weatherproof the structure. See Sweet's or write us for Bulletin SPV-18 for complete description of this modern air vitalizer.

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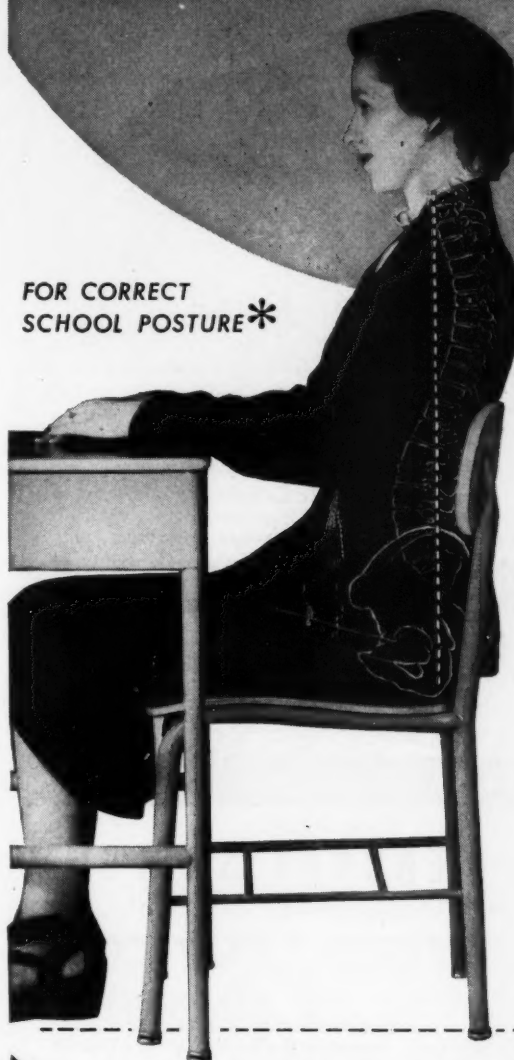
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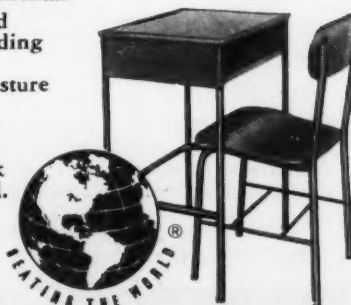


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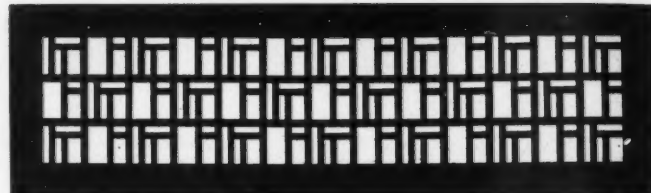
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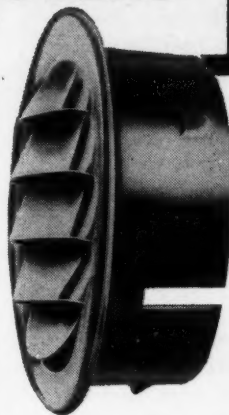
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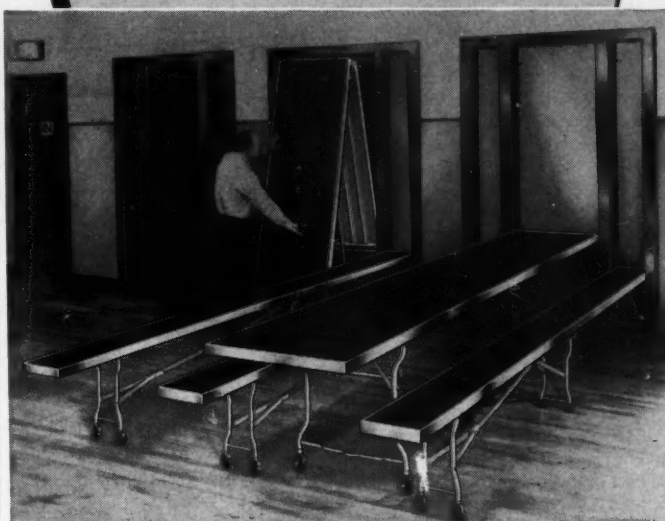
If you would like all the facts on how Enduro-Ashlar Architectural Terra Cotta helps you solve unusual design problems, phone or write us today. The Federal Seaboard engineering department is available to you from the initial planning stages through drafting and construction. Advice on preliminary sketches, as well as construction detail, data, color samples and estimates, will be furnished promptly without charge.

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(Cooler in Summer)  
(Warmer in Winter)

## at Low Cost

IT is possible to build a snug, tight house—cooler in summer, warmer in winter—at lower cost. Richkraft breather papers and Richflex Reflective Insulation make a combination that means the best in wall construction. Richkraft Sheathing Paper lets the wall breathe and permits moisture to escape, yet it stops the wind, rain and dust, making a snug wall. All Richkraft breather sheets meet all F. H. A. Specifications for vapor barrier and breather sheets.

Richflex Reflective Insulation in the walls and laid over the joists in the crawl space will reflect 75% of the radiant summer heat and acts as a barrier to cold in winter weather. In remodeling, Richflex will keep thick insulation from storing heat by day and makes rooms more comfortable on hot summer nights.

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ADDRESS \_\_\_\_\_

TOWN \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_

## REQUIRED READING

(Reviews continued from page 48)

Salmon and Swan to carpenters and builders. National origin of the makers, however, plus their growing feeling of independence, lent an individuality to pieces that were inspired by English designs. Just as certain European characteristics showed up in the architecture of American houses in colonial times, so the French Huguenots in Newport, the Dutch in New York, Germans in Pennsylvania and the rugged mixture of German, Irish, Scotch and Swiss in North Carolina revealed the influence of their homelands in the furniture designed in this period.

One of the outstanding features of this book is the regional identification by the kinds of wood that were used. Mr. Downs devotes an entire section of the introduction to the subject of woods: their use in house frames, in paneling, case pieces, chairs, veneers, and as secondary woods. In the extensive description accompanying the photograph of each piece, the types of wood used in it are included. In Philadelphia walnut was the favored wood for Queen Anne furniture, and it continued to serve Philadelphians well into the Chippendale period. Mahogany was first used in South Carolina, but its popularity grew quickly in the northern colonies during the later Chippendale period. The wild black cherry that grew sometimes to a diameter of four feet and to 100 feet in height was a great favorite in Connecticut, in upstate New York and on down to the Pennsylvania Dutch country. In Connecticut tulip was used for paneling, sheathing and for chests.

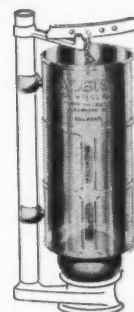
Mr. Downs points out that in order to determine the local origin of furniture, a study of the secondary woods used for drawer lining, backboards, braces and corner blocks is necessary. White pine, used extensively for building, interior paneling and 17th century case pieces, was relegated to secondary use in the Queen Anne and Chippendale periods when woods of a richer grain were needed to add elegance. From New Jersey southward yellow pine, still one of the most important woods for interior finish, was used for underframing; in the fine houses of Philadelphia it was made into paneling. Other pines used in furniture south of Pennsylvania were loblolly and longleaf. Ash and chestnut made up the drawer linings of the famous Newport block-front case pieces,

(Reviews continued on page 380)



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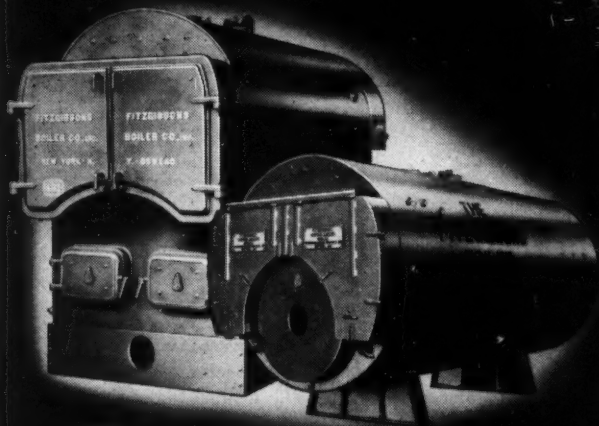
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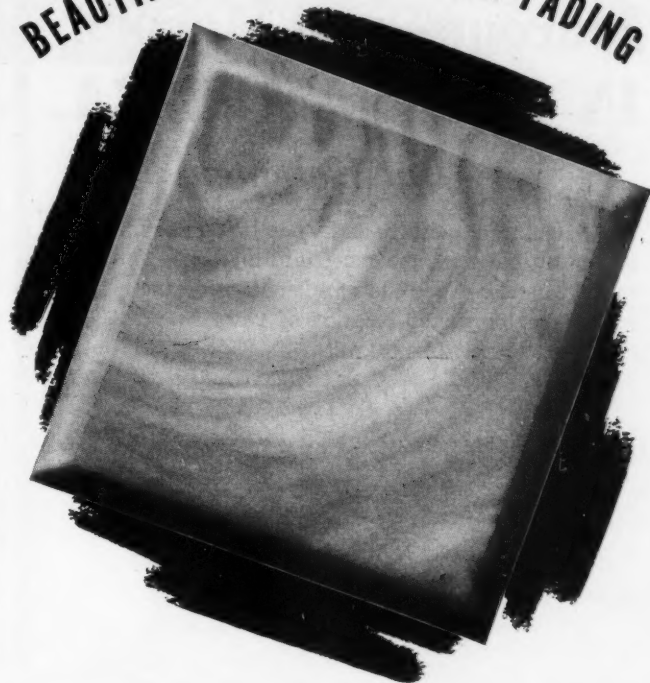
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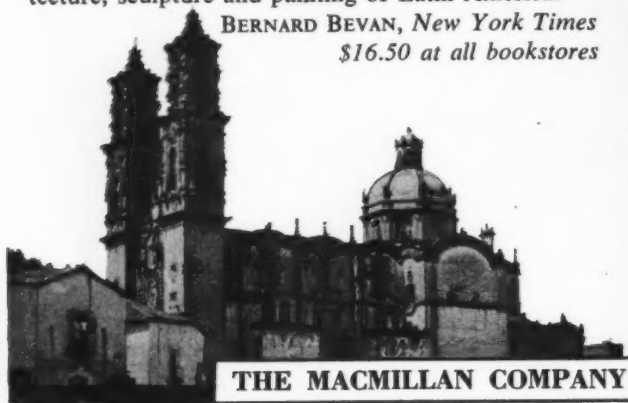
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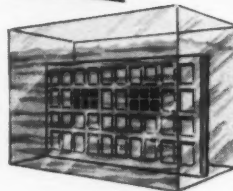
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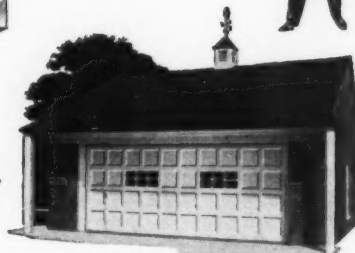
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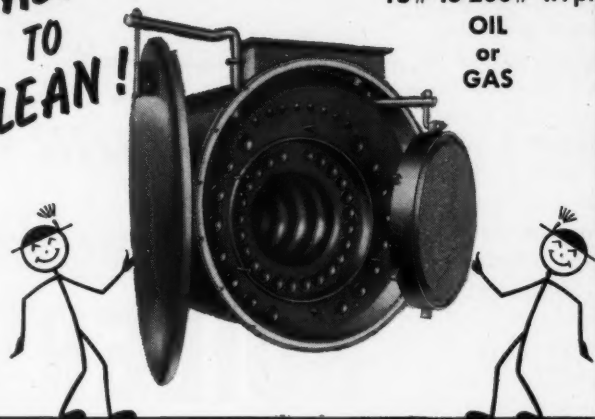
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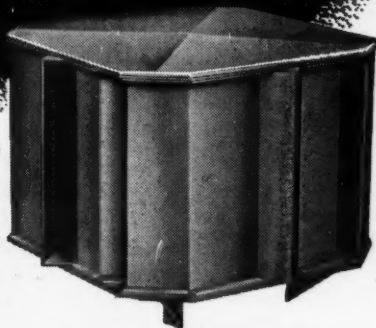
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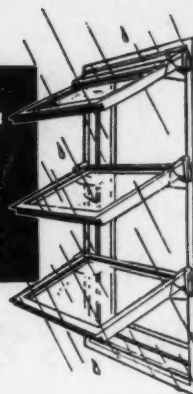
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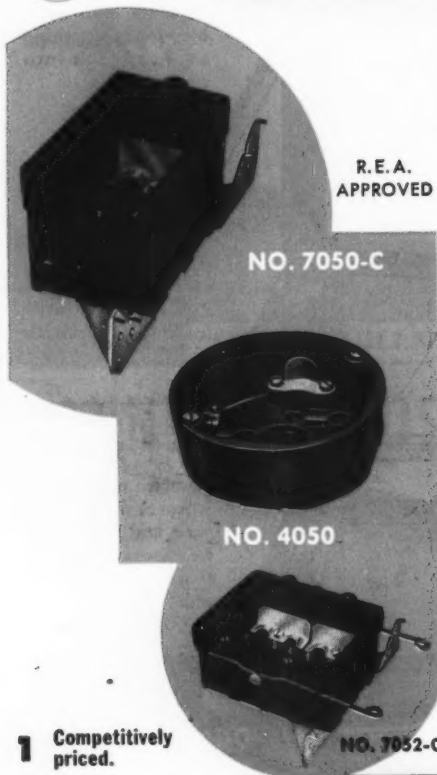
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## REQUIRED READING

(Reviews continued from page 376)

and in Philadelphia tulip, white cedar and oak were used for chests of drawers. White oak was combined with southern hard pine or tulip in frames and linings of Virginia pieces. Mr. Downs' success in identifications by means of secondary wood is a real contribution and one that adds to the value of the du Pont collection for the student or collector.

Ten of the Queen Anne and Chippendale rooms in the museum are pictured in color. The plates are outstanding examples of color photography at its present best. No one glancing at the pictured Maple Room could doubt the wood used here, so glowing is the color and so richly grained the curly figure of the veneer in the arm chair. Descriptions of the interiors accompany each illustration. These include date and place of origin of furniture, floor coverings, hangings, and chinaware, and original owners in many instances.

Both by education and experience Joseph Downs was eminently qualified to write a research volume of this scope. A graduate of the School of the Museum of Fine Arts in Boston, he later served in the museum's Department of Decorative Arts. He was curator of decorative arts in the Philadelphia Museum of Art and during the 17 years prior to his appointment at Winterthur in 1949, he served as curator of the American Wing in the Metropolitan Museum of Art.

The volume should be of great value to those working on restorations, to collectors of Americana in general and to collectors of furniture of the two periods in particular. No library devoted to the decorative arts in America could be considered complete without this book. It can only be hoped that Mr. Downs will be encouraged to follow the present work with others dealing with the 17th and 19th century furniture in the Winterthur Museum.

## NEW EDITIONS

*Louis Sullivan — Prophet of Modern Architecture.* By Hugh Morrison. Peter Smith (321 5th Ave., New York 16, N. Y.), 1952 — Mr. Morrison's fine and useful pioneer volume on Sullivan's life and work has, after many years of undeserved scarcity, been reprinted with a new supplementary bibliography. Although the reproductions leave something to be desired, it is good to have this work generally available once more.

(See page 6 for Index to Advertising)



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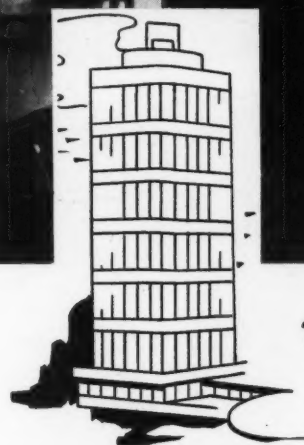
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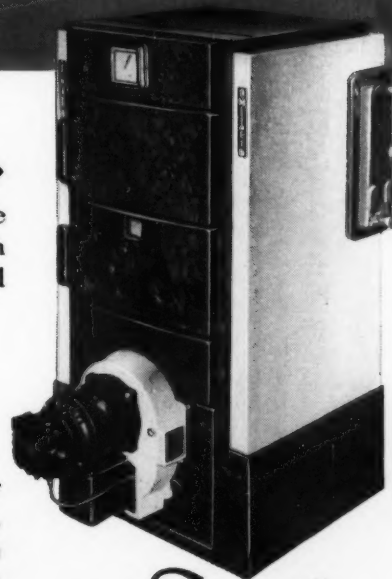
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